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The American Farmer.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." Virg.

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VOL. X.—No. 3.]

MARCH, 1881.

[NEW SERIES.]

Production of New Fruits from Seed.

BY MARSHALL PINCKNEY WILDER,

President of the American Pomological Society.

Messrs. Editors American Farmer :

The great losses and disappointments which were formerly experienced by the importation of foreign varieties not adapted to our soils or climate, compelled us to the better course, that of producing varieties from seed which might be suited to the various locations of our widely extended territory. The expediency of this practice, I am happy to know, has become so well established in the minds of our cultivators that the time is not far distant when every section of our continent will be provided with fruits that may be grown with success in every locality.

The adaptation of plants to various climates, and their distribution over the earth, involves a study so profound that few have any definite knowledge on the subject—why one fruit may succeed in one location, and a few miles distant fail entirely. It is, however, sufficient for us to know that we can produce from seed fruits which are by their constitution and habit capable of enduring the vicissitudes of the region we inhabit, and, like its people, thrive in a healthful condition; but no one, however, believes that he can accustom a tender plant, by acclimation, to conditions not in accordance with the laws of its being.

Whatever opinions may have been entertained, we must come at last to the conclusion that for the acquisition of hardy, valuable fruits, adapted to our various locations, we must depend on those produced from seed, more than upon any other source. The idea of acclimation is a fallacy. We should, therefore, abandon it at once, and rely upon the selection of the best seeds of best fruits for progress and success.

To these we are indebted for many of the finest fruits we possess. The success which has attended these efforts, limited as they have been until recently, is remarkable, and affords evidence that, with the knowledge now acquired in the art of cross-fertilization, and the sowing of the seeds of our best fruits, whether impreg-

nated by the hand of man or by the air or insects in the natural way, we can obtain varieties suited to every section of our country where any fruits can be grown.

The duty of the pomologist is to co-operate with nature in this improvement, and to use the implements she has placed in his hands. Dr. Asa Gray says "most of our esteemed fruits have not so much been given to man as made by him, and man's work is mainly to direct the course and tendency of nature." By these methods the farmer and the florist are producing wonderful results in the improvement of their products, often being surprised to see how kindly nature co-operates to bring forth the objects they desire.

I would, therefore, encourage the fruit cultivators of our land to sow continually the seeds of their best fruits, whether artificially crossed or not. Disappointments may occur—this is the lot of humanity—but should the practice I now recommend be generally followed, we shall ere the close of the present century have an abundance of fine fruits, suited to every location of our vast territory.

We rejoice in the interest which has sprung up throughout our country during the last forty years. No land has such advantages, and no nation has made such rapid strides in pomological progress as our own, during this period. Look, for instance, on the grape. Many now living can remember the time when the only American grapes were the Catawba, Isabella and Scuppernon varieties, and when not a seed had been sown for the production of a new variety. Now we have more than a hundred kinds of American grapes in our catalogues, many of which are of superior excellence, and thousands of seedlings every year are arising, from which some new and valuable varieties will be obtained, suited to some section of our territory.

Nor would I omit the wonderful fact that within the borders of the United States may be produced in abundance every variety of grape known to foreign lands, and should the *phylloxera* continue his depredations in the vineyards of the old world, our own land may in time be styled, as it was by the Scandinavians, *Vinland*, and become the vineland of the world.

In the words of Prof. Gray: "A good time is

coming for the grape, when varieties are so easily produced that they will have achieved their position when the American Pomological Society holds its Centennial celebration."

Nor is this enterprise confined to the grape, but is extending through all classes of our fruits, especially the strawberry, of which we have every year numerous new and fine acquisitions. But I have written more than I intended, and I will close with my oft repeated injunction: *Plant the most mature and perfect seeds of the hardy, vigorous and valuable varieties; and as a shorter process, ensuring more certain and happy results, cross or hybridize your best fruits.*

Boston, February 17, 1881.

Action of Frost on Plants.

At the January meeting of the D. C. Horticultural Society, Mr. Wm. Saunders, Superintendent of the Agricultural Grounds, had a paper (as per title) from which I give your readers some of his points:

"You can't tell beforehand what plants or trees are hardy. The wood of the orange is to appearance as hard as the oak. Nor will trees, etc., brought from corresponding degrees of latitude grow equally as well in another country that has a similar temperature. Australian plants which will endure a cold of 15° below zero in their native habitats are destroyed here when the thermometer reaches the freezing points. The arid climate of Australia thoroughly ripens the wood, which is thus rendered capable of enduring the severe cold.

"The temperature and physical condition of the soil have also an important controlling influence in the cold-resisting power of plants. Unless a proper degree of moisture is furnished by the roots the more succulent branches will become dry and shriveled under the influence of cold, dry currents of air, although the thermometer be above the freezing point; and when the temperature of the soil is low the activity of the roots is correspondingly decreased, and they are unable to replace the losses caused by evaporation from the external surfaces of the branches and stems of the plants.

"Seeing that the temperature of the soil in which plants are growing has so potent an influence on their cold-resisting powers we realize the value of the application of leaves, strawy manures and similar materials over the roots of plants during Winter.

"From what has been stated it is evident that, so far as concerns soil and culture, the greatest safeguard against injury to plants from cold is that of having properly ripened or matured growths. How much of the disappointment in fruit culture is the result of immatured growths it would be difficult to determine. I have long considered this to be cause of the disease known as *yellowing* in the peach tree. This disease is most prevalent in localities where growth is prolonged until it is suddenly arrested by a killing frost; and I am not aware of its existence in climates where the tree becomes deciduous in the absence of frost.

"It is within the province of the cultivator to

assist nature in the requisites for perfect maturation of growth. The fruit grower will be careful to avoid setting his trees in wet soil, or in low, rich lands. He will also prudently abstain from the application of stimulating manures, which would have a tendency to encourage late growth in Autumn; he will abstain from all cultural operations on the soil when growth should be checked rather than encouraged, and use every available means to secure an early cessation of wood growth.

"When a fundamental principle is once determined and fairly understood, operative details based upon this knowledge are readily deduced and applied. As an example, I may allude to the well known fact that many of our beautiful evergreen trees from the northwestern and California coasts, as also various Asiatic conifers, have a great tendency to commence a second active growth during the moist genial weather which frequently occurs here during the early Fall months. This growth never ripens, and in consequence is destroyed by the first frost, greatly to the injury of the plant. The mammoth tree of California and the Japan cedar may be cited as typical trees of this class. These Fall growths may be checked by pruning the roots of the trees during September, which will ensure matured wood; the young branches will become solid and firm, instead of being unripe and filled with watery fluid, and are thus prepared to stand the Winter without injury.

"Then again, as to protection and the best means of preserving plants from injury by freezing, we are guided by the knowledge of the action of the frost on vegetation. Evaporation of the sap being the result of exposure to currents of frosty air, our efforts at protection will be in a direction to antagonize this result. Practically, taking such plants as roses, grape vines and raspberries as examples, the best method is to lay them on the surface of the ground and cover them with an inch thickness of sand or soil, or, indeed, any material that will protect them from direct contact with the air and the rays of the sun.

"With regard to the general subject of protecting the plants, some persons contend that a fruit tree or plant to be valuable, or fitted for general culture, must be able to take care of itself. This should be looked upon as a lame excuse for indolence and neglect. It is the province of man to assist nature in producing such results as he finds most desirable for his purposes; and if he removes plants from their natural conditions, and then abandon them, so to speak, he must expect to realize the usual consequences of neglect."

Washington, D. C.

G. F. NEEDHAM.

THE BILL to make the Commissioner of Agriculture a Cabinet Officer failed to pass the House of Representatives under a suspension of the rules, February 7th, by just one vote. There were 164 for and 83 against, a two-thirds vote being necessary. The measure cannot become a law at this session.

Immigration and Labor.

Maryland's Advantages and Opportunities.

Messrs. Editors American Farmer:

As yet there is no break in the monotone of this surprising season. February is generally a very busy month with us, but now the face of mother earth is closely veiled with snow. I am therefore induced to resume my pen, and will venture to offer you a few random thoughts suggested primarily by a brief examination this morning of one of those useful little hand-books in the form of statistical almanacs, which some city editors annually present to their subscribers.

I learn from it, that during the last year the great European hive has swarmed as never before; and from the over-peopled districts of the old world an unintermitting stream of immigration is still flowing, regardless of the Winter's rigors on sea and land. How potent must be the motives which incite this wonderful transmigration, which impel such vast numbers of human beings so far that "half the convex world intrudes" between them and their native homes! The ills from which they fly are probably no greater now than they have been for ages past; but the facilities for escaping them have been increasing year by year, until now, by means of our large ocean steamers and trunk lines of railroad, it is possible to transfer a village of a thousand souls, with all their household goods, *semel et simul*, from the shores of the Baltic to the banks of the Yellowstone. The whole journey is made in little more than a fortnight and at the least possible cost; since if it were not for this living freight many ships would come empty to our ports.

In 1880, there were 320,000 immigrants landed at New York, and 26,500 at Baltimore. Taking all our seaports together, the total number cannot be much short of half a million. Of those landed in Baltimore, perhaps not a hundred have remained in Maryland. Before reaching your city they sailed for a hundred miles or more through a country which offers them as desirable homes as can be found in the United States, and as cheap as any, when all their improvements and advantageous surroundings are considered. In passing up the bay, they looked, on one side, upon the fields of St. Mary's, Calvert and Anne Arundel. On the other hand, they beheld the shores of Somerset, Dorchester, Talbot and Queen Anne.* These seven counties now have a foreign-born population of but 1,630. By the census of 1870, there were 1,375; so that in the last decade their gain in population from immigration has been only 255.

Now why is this so? It is not, as some have assumed, because our climate is unhealthy. I venture to predict that the census returns, when compiled, will show that the tide-water region is as favorable to health and longevity as the Piedmont or mountain sections of the State. The great valleys of the interior into which the vast column of immigrants has been passing for so many years are not so salubrious as our coast

country. All intelligent observers who have ever visited the frontier settlements know how often and much they suffer from miasmatic diseases.

In addition to this it is said that *somewhere* in the West, droughts are frequent and blasting; grasshoppers are multitudinous and voracious; that tornadoes are of frequent occurrence; and finally, that the railroad corporations gobble up about all that is ever saved from other calamities. It would be difficult to enumerate all the trials which beset the poor immigrants before they can surround themselves with a tithe of the comforts which abound in the old States. The condition of the Conemara colony affords the most recent illustration of the hardships of pioneer life, though that can scarcely be regarded as a fair example, as the Irish seem to have less thrift and foresight than the settlers from other countries. They are not an agricultural people; but for all the other labors required to build up a country, their services are invaluable. It must be admitted, however, that as *boases* in great political and financial transactions they are not—a success.

There can be no question, I think, that the preference which immigrants show for Western lands is due almost entirely to the low *first cost* of them. Very few indeed bring enough money to buy a Maryland farm; and those who do, are irresistibly attracted to those communities where they will find their own language and customs. For the present at least we need not expect to obtain many settlers (land-buyers) from the crowds arriving at Locust Point; and of laborers we just now seem to have enough. If our farmers were all out of debt, they would not desire any other changes than those which will come with the natural increase of our own population. What better heritage could we wish to leave to our children than the fair fields we now occupy? What better manners and customs than those which have come down to them from an English speaking ancestry?

There has been no time within our recollection when there were not enough hands in Maryland to perform the ordinary farm work of the State. There was, however, a period in our history, covering a few years immediately after the war, when our emancipated negroes, not knowing what to do with themselves, refused to engage their services by the month or year. They wandered up and down in the land, apparently from no other motive than to satisfy themselves that they were free to go and come as they pleased. During this period our agriculture was paralyzed, and though an effort was made by the State to supply its deserted fields with labor, but few of our land owners could accommodate themselves to the changes required for the successful employment of Europeans, who were ignorant of our language and modes of cultivation. But the very endeavor to obtain it produced a good effect, and every obstacle to the introduction of white labor would have been surmounted eventually, if the colored race had not again resumed the implements of husbandry. After the abolition of the Freedman's Bureau, they awoke from their dreams, and settled down to regular work at or near their old homes. They have

* Kent is left out, because the census tables before me are incomplete as to that county.

discovered that no men, whether black or white, bond or free, can subsist without labor; and if they would cease to expect the miracles promised by politicians, and learn to identify their interests with those of the section in which they live, they would be more contented and happy.

The seven Bay-side counties before named, have now a colored population of 60,000—a gain of about 7,000 in the last ten years. Their condition is perhaps as comfortable as that of any class of laborers anywhere. Our land holders generally appear to be satisfied with this labor. It has been trained to their methods, and is as cheap as any in the United States. How long this state of affairs will continue, and what effect the colored schools are to produce upon the future of the race, are questions we may not pause now to consider.

If, as many persons believe, (and not without cause when we make due allowance for the constitutional antipathy existing between certain races,) the presence of this large negro population has tended to repel white labor from our section, yet the fact that it is here, available and willing to work, ought to make our cheap lands very attractive to capitalists. Investors who are putting their millions into the many wild projects of the hour, should remember that land is about the only species of property which cannot be destroyed. Our very rich men, most of whom seem to be in favor of a "strong government," should also bear in mind that under the regime of the coming empire, the stars and garters and titles of nobility will probably be granted first to the large landed proprietors. They should seize the present opportunity to buy from fifty to one hundred thousand acres each, and thus qualify themselves for becoming, say, the Dukes of Arundel or Calvert, or the Earls of Somerset and Dorchester. Historic titles these; and many of our *new rich*, who now cover their possessions with stolen heraldic blazoning, would give a million for the privilege of wearing them. And after all, perhaps they would better deserve such distinctions than the rapacious rabble who followed William the Conqueror.

But seriously, why is it that real estate should be the last thing sought for investment? Is it because it is about the only thing that cannot evade taxation; and that the tendency of the times is to hide wealth where no prying eye can find it? In this county we have some of the poorest as well as some of the richest land in Maryland; but I know none of the poorest that would not pay better than U. S. Bonds. But even if we *could* sell our surplus lands, it would be impossible to find better investments for the proceeds, except to pay debts. And this, I think, is the chief and, with many farmers, the only reason why they desire to sell. At the close of the war they were left with their farms alone, and without compensation for the labor they had lost. To maintain their homes and employ labor; to pay taxes, insurances, and high rates for interest, has caused a long and anxious struggle; and from which many have fled in despair to the cities, to take refuge in other employments. Once relieved of their embarrassments, a future of comfort and contentment would await our

land owners. The years of toil and honest poverty through which they have passed have taught many useful lessons; and though some of us grey-beards, whose strength is beginning to fail, may sometimes look back and long for the ease of plantation life, it is to be hoped that the young who are to fill our places will make the old land more fruitful and prosperous than ever before.

The future welfare of the cotton producing States seems to be already assured. Producing an article which is in constantly increasing demand, they are rapidly accumulating the means to develop all their great mineral and manufacturing resources. In 1860 they did not have the machinery to make their own clothes or shoes, or implements of war or peaceful industry. All that is now changed, and before the close of the present century, the most extensive and profitable manufactories of all kinds will probably be found in those States.

But the border States produce no one article entering largely into the world's commerce, that cannot be as well grown elsewhere; and I am disposed to think with your correspondent, Mr. Holman, that stock raising is now about the best business for the farmers of southern Maryland and eastern Virginia to engage in. If our pastures are not rich, they are extensive; and *enough* seems to make it quite feasible. We can certainly raise good mutton with profit, and for sheep there is a foreign demand, as well as good home markets.

But in the consideration of the great and ever pressing question of "how best to restore values to our property," we are always confronted with what is not inaptly called the *labor problem*; and which time alone can solve. If our colored population are to be kept in a state of *quasi* hostility to their employers, our material prosperity must be seriously retarded. A feeling of discontent may be fostered until it becomes chronic and pervading; and when, looking beyond the borders of our old plantations, we behold so much new and unbroken land requiring labor, it is impossible to resist the conviction that southern land owners should omit no opportunity to attract immigration. A little rill of it may soon become a broad *crevasse*; and in a few years no exodus to Kansas or elsewhere could much disturb their industries. History records some great and sudden migrations of nations; and a credulous race of people, dissatisfied from any cause, may be readily stampeded from a country in which they have no root. The notable drift of large bodies of negroes up the Mississippi last year was an unnatural movement, and was stimulated by false representations. Guided by their own interests and instincts they would gravitate toward the equator; and though Africa is now stretching out her hands for her civilized children, it is not unlikely that vast numbers of them will be filtered through Mexico and down into the Central American States, where they will find communities made up almost entirely of mixed blood. An outward flow in that direction may be hastened by the demand for labor on the great canals and railroads now projected there. He who shuts his eyes, and expects the present state of affairs to be permanent, deludes himself.

Whatever changes may occur, let us hope they may be so gradual as not to affect the public prosperity.

We occasionally hear of plans for repatriating the Jews, of whom there are two and a-half millions in Russia alone, in the most destitute condition. But they have an aversion for agriculture and make poor colonists. Africa doubtless will have gathered home her sons long before the Israelites have reoccupied Palestine. The same avarice and desire for commercial advantages which impelled England to supply her American colonies with slaves, will most likely be potent factors in restoring their descendants to their pristine land. When Great Britain finds the cotton country for which she has been so long exploring Soudan, then Exeter Hall will begin to shed tears over the wickedness of keeping the poor blacks in so cold a country as ours. They will be wanted for the instruction of the native tribes in husbandry and its kindred arts.

On examining a volume of Consular Reports recently received from a member of Congress, I learn that the peasantry of Italy are now much inclined to emigrate, as their wages are low (about \$120 per annum without rations), and taxation most oppressive. Carefully prepared statistics submitted to the Italian Senate last year show that a family of Italian peasants pay on an average sixteen dollars tax annually for the support of the government. This is in addition to the tax on landed property which any of them may chance to own. What would our laborers think if burdened with such taxation? They certainly would have to forego the luxury of keeping so many *valuable* coon dogs. Our Consul at Naples (Mr. Duncan, a gentleman who seems to be wide awake to the needs of his country) writes to the State Department that all the steamers from the Mediterranean for South America now go crowded with Italian emigrants. He adds:—

"A very considerable portion of this could be turned into our Southern States without difficulty, if facilities for cheap and direct transportation existed. That the Italian peasants would be a good class of emigrants for them, I am quite convinced. They are industrious, patient and saving; and accustomed to very careful cultivation of the soil which we of the South very specially need. They would find there a climate very similar to their own. Many of the productions, too, would be the same; and other articles grown in Italy could be introduced by them with great profit to our country. Should an American company contemplate establishing a line of steamers to the Mediterranean, it would do well to make arrangements for carrying emigrants direct to Norfolk or Charleston. In this case I should like to contribute what I can in the way of information to its success."

Since the report (from which the above lines are extracted) was published, a great many Italians have been landed at New Orleans; and it would augur well for the future of the new South, if there were fleets of steamships loaded with these industrious people, coming in the track of their own first great navigator to assist

in building up a richer and more splendid country than Columbus ever saw in his visions of Cathay.

Pardon me if, by indulging in these reflections, I have led you a little aside from the usual path of your Journal; but they are not entirely foreign to its purpose. They have been prompted, as before said, by some tables of figures in a new Almanac, though our welfare as a people might be better conserved if we referred as well to the old maxims contained in poor Richard's. Mentioning almanacs, let me assure you that the agricultural press has not yet quite superseded them as guides in farming; and it will not do to hold the moon and astronomical signs cheaply, especially in the presence of those who believe in their influence. Occasionally, when disposed to enjoy a little quiet diversion, I walk down to the cottage of my German vine-dresser and ask him to consult his Dutch almanac on some subject. It would amuse you to see the air of importance with which he takes down from his nail that much worn book of fate. Compared with that oracle, your carefully compiled city calendars are but as tallow candles to the electric light.

You have been kind enough to ask me to write on subjects pertaining to husbandry; but I know nothing about farming which your many able correspondents do not know a great deal better. I go to your pages for instruction, and generally peruse your paper from cover to cover before I lay it down. Let me add that the Home Department is not the least interesting portion of it. And how much we are indebted in every way to the peerless women who have cheered our labors and filled our country homes with hope and joy in the gloomy days of the past. Crops of all kinds may fail, and at the end of the year our balance may be on the wrong side of the ledger; but their patience and devotion never fails, and we always possess a boundless credit in the treasury of their affections. If we were to write until our ink be dry, we could not sufficiently extol the heroic self denial and fortitude of the mothers, wives and daughters of our farmers.

I am sometimes inclined to think that you gentlemen of the agricultural press have been already only too successful in your efforts; and that it is about time you were "*warned*"—as the French have it—if not suppressed. There is a great over production of almost everything in this country; and, in a general way, farming is not as remunerative as it should be. If there happens to be a scarcity of any particular product, you forthwith wave your enchanted wands or pens, and every farmer begins to plant it. The next season perhaps, your wharves are overcrowded with it, and if it happens to be a perishable article, it is thrown into the docks to assist in perfuming those odoriferous zephyrs which fan the slumbers of your people.

I have also ventured to think that every editor and printing press in the land should now be employed in teaching the science of political economy. What boots it how industrious we are or how frugal in our private expenditures, if our rulers in their reckless extravagance are allowed to squander five hundred millions of dollars in a single bill. Is it any wonder that farmers are becoming weary of their ever in-

creasing burdens, and that nearly every man you meet wants an office. Oh for the pens of former times! Oh for the brave men who used them!

If we may judge from the number of splendid public banquets given in your city this Winter, and from the speeches delivered at them, but little heed seems to be given to the management of the public resources, or as to how all the appropriations wanted are to be paid. We have no objections to all the *high jinks* in which the prosperous people engaged in various branches of trade may be inclined to indulge; indeed we rather enjoy reading about them, and the descriptions of the decorations, the music and the *menu* are not always uninteresting. But when a gentleman gets on his legs at a merchants' dinner and says that "*on them rests the support of all the classes*," &c., &c., we may be allowed to respectfully protest. The people who cultivate the soil and live on bacon and greens will never surrender their claim to that honor. It should be said, however, in extenuation of the speech, that it was made at the *close* of what seems to have been a very hilarious and successful feast. Excuse me for intruding again upon your patience or pages, and believe me truly yours.

Anne Arundel Co., Feb. 9th.

L. G.

Promoting Immigration to Maryland and Virginia.

Editors American Farmer:

Why do the ten thousands of emigrants all wend their way to the distant West? The reason upon reflection is plain, and is chiefly attributable to the railroads and their agents. Many of these roads own millions of acres of land and desire to sell. Exaggerated and flaming hand-bills in various languages are distributed, and they need the passage money and the chance to sell, and the Baltimore and Ohio seeks the passage money and her agents decry the lands of Maryland and Virginia in every possible way to prevent passengers from locating in them. The agents tell the emigrants our lands are worn out by cultivation of tobacco; are high in price and are sickly; too impoverished even to be improved. Nothing can overcome this State of affairs unless the people of the two states combine and employ active agents, speaking the language of the emigrants, to disabuse their minds and place the true state of the case before them.

A central bureau should be located in Baltimore, with lists of farms for sale and descriptions of the advantages and localities, and hand-bills and agents employed to meet the railroad agents, and show to the ignorant emigrants how deeply they are deceived.

A. T. W.

Anne Arundel County, Md.

Editors American Farmer:

I give you a hasty sketch of some few of the natural agricultural advantages of Anne Arundel county, by way of a complement to your letter from Mr. Davis, in your January number.

Lying along the western side of the Chesapeake Bay, Anne Arundel county is also intersected on that side by the navigable tributaries the Magothy, the Severn, the South and the West rivers, and bounded on the whole length of its other side by the Patuxent, which, along its further southern extremity, is also navigable, and reaching on its north, accessible to two of the first cities of our whole country. Our county has always possessed, before the days of railroads, peculiar and easy advantages for shipment of its varied productions. And now, intersected as it is by the Baltimore and Ohio, Baltimore and Potomac, and Annapolis and Elkridge railroads, not to mention the projected Baltimore and Drum Point railroad, through its whole length, the county offers to its farmers, and to those who may desire to seek a home or a market in the same honorable calling, all these advantages, without which the toil of the husbandman is much of "love's labor lost."

But besides these peculiar advantages of transportation, our county has to offer her people and the seeker for pastoral pleasure, (and without which the whistle of the locomotive and the washing of the waters on her shores were but drains upon her vitals,) natural variety and kindliness of soil, unsurpassed by any other county in the State.

The upper, and mostly sandy portion, unfitted for the growth of cereals, grass and forage for cattle, produces vegetables and fruits, and in close accessibility to our large city, unrivalled in quality, while the central and southern portions are most admirably adapted to the growth of tobacco, corn, wheat and grass, cattle, horses, sheep and swine. The natural fertility of our South and West river lands was described by Dr. Higgins as equal to that of the lands of the Mississippi valley, and that it was only necessary to plow an inch deeper occasionally, and by the management and use of clover and plaster, to keep up this fertility, and where there is not a rock or a stone to break a plow or impede cultivation.

Strange to say, that with the almost universal use of commercial fertilizers elsewhere throughout the State, our people have little faith in them, at least for use in growing wheat or corn, and repeated trials have led to this conclusion, except with tobacco, and then the effect is sometimes doubtful.

To those of refined and aesthetic tastes, who desire sometimes to lift their heads above the drudgery of the soil, and bathe their souls in the beauties of nature, our county offers landscape attractions of beauty and variety. In some parts picturesque, broken, hilly and undulating, interspersed with streams, and variegated with open lands and wooded hills, the fancy can disport itself in shade and solitude, or upon the highlands overlooking the waters, view the whole expanse of the Chesapeake, as it appears with its blue level, dotted with sails, and stretching as far as the eye can reach, way over the lowland "swamp" between, like a bright aerial table land.

But with all the natural advantages enumerated, the circumstances of our people are not all the same, nor any necessarily easy. But only to

the diligent and the thrifty, the enterprising husbandman, and the grateful son of the soil, who by management, care and application encourage and renew their strength, does the land yield her increase, and the harvests pour out their bountiful supply.

And now to all those who, with like aims and purpose, and with a ready and willing heart and mind, desire to come among us and aid us in developing our many natural and plentiful resources, we promise a like bounty and a welcome among a genial, kindly and hospitable people.

January 25, 1881.

H.

Hints on Top Dressing.

Messrs. Editors American Farmer:

This is a very old subject, but its discussion may be of some help, if not to old, at least to young farmers. By top dressing you not only make the soil richer by the application of manure or compost, but you accomplish nearly as much good by shielding the crops from the cold winds, and the freezing and thawing of Winter, as well as the intense heat of Summer—so you have a two-fold gain. But it should be applied with sound judgment; for instance, if the meadow is nearly run out, or has been trampled hard by stock, not much good may be looked for. The newly seeded meadow is the place to put it. In the Fall or early Winter is the best season, but now is a very good time, putting it on early in the morning before the ground becomes too soft for the teams.

The manure I use is principally made up of butcher offal, leaves, sods and manure from the cattle and hog pens, thrown together in large piles, allowed to ferment and then turned and plaster added at the rate of 200 pounds to every four or five cords. When manure is fine, and ground suitable for hauling, I take two teams with three men to each, so whilst one is loading the manure is being spread right from the other wagon. Two men spreading whilst one follows behind and scatters any big lumps so all the ground may be equally covered. By this plan each set of men is kept busy at profitable work; the one at the pile, the other in the field, the entire time. I spread about six three-horse wagon loads to the acre, as I find a little spread all over the ground, and often, is of more benefit than a great quantity carelessly put on at long intervals. And here I would say I consider it a great improvement to spread right from the wagon. You can see better how to apply it; you can get it on more evenly, and you avoid the great waste of having too much in some places and too little in others, which little manure piles are sure to cause.

In three or four weeks after spreading I take a brush harrow and run over the grass, first one way and then cross it, and the manure is all put down among the grass roots, the place for it. This I consider very important. By this plan, if the season is moist, your crop will be very heavy, if dry your crop will still be good.

I have also for some years followed this plan with the same success on my wheat; the wheat being put in in the Fall with a good fertilizer,

making plump wheat averaging from twenty-five to thirty-two bushels per acre, and giving a fine set of grass afterwards. It costs to farm this way, but you are working at a profit all the while.

If you are a corn grower, put all your manure on the sod you intend to break up as far as the manure will go. Let it remain till May, break it up, plant your crop, and give it a thorough working, and see if you do not realize more profit than by planting a great field by use of fertilizers. If you are a fruit grower, put some well-rotted manure *now* on your strawberry vines, work it well into the soil, and see what a mass of fruit you will have. If you are a gardener, put some well-rotted rich manure on your Fall-plowed ground for onions, rub it well into the surface soil, make it fine and level, and then drill in your seed and you will be astonished at the yield.

Instead of buying fertilizers for corn, wheat and grass, if the same money was spent for mill-feed and corn chop, and fed to good stock, the manure saved by using the leaves of the forest, the sods of the ditches and head rows, and well mixed together, a vast pile of compost would be available to gladden you with heavy crops and to fill your pocket at the season's close. You would have more grass, more stock, more manure, and, above all, more heart in your business. "Where no oxen are, the crib is clean; but much increase is by the strength of the ox."

Baltimore Co., Md., Feb. 23, 1881.

S.

[Our correspondent practices what he advises, and his own success demonstrates that he is drawing no fancy sketches. He is one of our progressive young farmers in whom is the hope of the calling.—Eds.]

Timely Thoughts.

It is wise to arrange in the Winter for the Summer campaign, whilst little of profit can be done except feeding stock, making rails, getting posts, etc. Plans for operations can be made and implements gotten ready for use as soon as the ground can be broken for corn, oats, etc. Often manure can be drawn out and so arranged as to be spread evenly. Fertilizers can be purchased and manipulated for utilization. Proper attention to colts and young cattle will serve to promote their improvement and growth before they are turned to pasture. Some grain mixed with cut or crushed food tells to advantage in their growth and improvement; without that it is never so well chewed as to be assimilated. It is well for stock to have their bellies filled, as it aids digestion, and they have more time to rest. Rest and exercise are both good for animals.

What most farmers need is money, and there are many ways of making it. That way is the best where it does not take too much time and labor to make it with. Some men can make it in less time, with less means and at less cost. Therefore time and cost must be taken into consideration in everything—thus the difference in the success. With some men, their time is their capital and their hands the medium of success. Time is valuable to all; when lost or wrongly applied it is gone forever.

There can be economy in the choice of implements—some are time and labor saving and do the work better. They should be in good order as well as operated to advantage. One should have all needful implements, so as not to have to borrow—should that be the case return them in good time and order. He that “goes borrowing goes sorrowing.”

This world is made up of small things—as “many a mickle makes a muckle.” So take care of small things and the large will take care of themselves. In making your calculations allow for loss and shrinkage and unfavorable seasons. “You cannot be from all misfortunes free.” Changes are always going on. The best way to instruct the young and remind the old, is to print whatever might be useful. Dr. Franklin was a laborious man, a philosopher, statesman and sage. Whilst he discovered how to attract the lightning and protect various structures, he sent out numerous “wise laws and modern instances,” and benefitted the world by his labors and studies. What is known by the old and studious, is new to the young and those pursuing the industries. The man that plants a tree and digs a well, provides fruit, shade and water for others as well as himself. How much more useful is the careful and industrious than the idle and wasteful. Few idlers make statesmen or philosophers. Honor, fame and wealth are not common to the idle, but are the fruits of care, labor and perseverance. “He who by the plow would thrive, must either hold himself or drive.” Hercules told the man that called on him for help with his load, “before he called on him for aid—he must put his shoulder to the wheel.”

I will wind up these few lines by some desultory remarks. Some would-be-witty fops take opportunities for sneering at country life, and affect to be smart by turning up their noses in derision and emit some trashy wit. As Burns would say: “They are naught but senseless asses.” A man to be a good farmer cannot be a fool. In his business he must exercise judgment, patience and industry. The best men of the sciences are laboring to find out what will add knowledge, and the most ingenious men to improve the machinery to adapt the science to general satisfaction. Some of our most distinguished citizens of the past, among whom was Washington, preferred agriculture to political positions of trust and honor. I could name others of continental fame of the same tastes and instincts, but it would be the work of supererogation. I will close this by saying, no man can succeed in agriculture or any other calling without he enters on it with a will and push. Patience and perseverance will overcome obstacles and remove mountains. PHILLO.

Ensilage in Virginia.

Messrs. Editors American Farmer:

I had no intention whatever to try even an experiment with “ensilage” at the beginning of last year. Finding out, however, that my grass crop would be very short, something had to be done to supplement it. Millet and green corn must be the crops at that late date to depend on.

Having to leave home, directions were left to plant a certain lot of ground with corn. After a protracted drought it rained, and the corn, two (2) bushels, was drilled on the 27th of July, 1880, in rows three feet apart. Land measured about an acre stepped off, and was worked twice with a double shovel plow. Rained 14th September and 5th October; crop much injured by drought, stunted in growth and burnt up at bottom.

Commenced digging the “silo,” October 2d; dimensions 24 ft. x 6 ft. x 6 ft.; floored and lined on sides and ends with old plank; plank projecting about one foot above ground.

Commenced filling October 6th, using a Sinclair 8 inch Propeller, No. 2, Fodder and Hay Cutter, bought of H. M. Smith & Co., Richmond, Va. Capacity of cutter said to be 150 bushels an hour. Put in first day one and a half feet in depth; fodder very wet with dew. Put in all the corn by the evening of October 8th, which filled silo, four and a half feet. I did not know how large a silo to dig for the corn, and its being too large was a great fault. Tramped with men but not with animals. Instead of covering with dirt, put up an old fashioned “top-fodder” house over the silo. The morning after, having had everything prepared for the purpose, we covered the silo with plank, after putting in some straw, and weighted it with sixteen loads of rock, estimated at 1000 lbs. each, making 1000 lbs. to the square yard.

Wishing to make the ensilage last until as near the putting out of Spring grasses as possible, the silo was not opened until February 4th, inst. It was found to be in a perfect state of preservation, the best proof of its excellence being that the cows eat it with avidity.

The amount fed to the cows is as much as prudence will admit at first. The amount can be doubled, and will then feed ten cows two (2) months. Since using the ensilage the flow of milk has increased, and the butter is becoming yellower. Altogether the experiment has been most satisfactory to me.

Halifax Co., Va., Feb. 17, 1881.

g.

A Word to Young Farmers.

Messrs. Editors American Farmer:

It was greatly regretted by me that I was unable to comply with your request for a report on my experiments in tobacco, but I will willingly give it later, after I have marketed my present crop and can give figures comparing the “Wilson” with what I will now name, if it is not too presumptuous on my part, the Maryland Broad Leaf Tobacco.

In lieu of above, if I am not asking for more valuable space than the importance of this article will entitle it to, I would like to say a word to the young farmers of that section of A. A. Co. called West River, and also to as many others as will think it worth reading.

Are you aware of the many advantages you possess? Of climate which no one will dispute? Of soil which with little or no manure and poor tillage has yielded an average crop of corn and tobacco for years, with labor plentiful and to be had at from 4 to \$8 a month and board or allow-

ance, with cheap water transportation to Baltimore, as good a market as any in the country, and improving every day? I ask, are you aware of this? If you are, why then do you not turn them more to your own benefit?

Why not begin at once to impress upon your hands with kind words, that the better they work for you the more they are doing for themselves, the better crops they make by their labor, the more able are you to pay them their wages in full and promptly at the end of every month?

Why not take better care of your horses, and not think it a waste of time for a hand to curry them before they go to work in the morning, or to rub them down when they are brought in at noon wet with perspiration?

Throw away your old iron plow and get a steel one, or what is better, an Oliver Chilled, thereby being enabled to do more work and better in the same time, as well as saving your horses to a great extent.

Haul what manure you may have this Spring out on your wheat, and if you have any places in the field that will be put in corn, which you think will need manure, then buy as much as you think necessary of bone, half raw and half dissolved, and put it on those places, and see what an improvement there will be in the corn, and if wheat is to follow, how beautiful and green it will look in the Fall, and how much greater your crop of grain will be at harvest.

It will pay; don't you fear to go in debt for the bone, if you must, for the trial will more than bring you out, and it will do more, for you will have greater confidence in yourself and in your knowledge of how to do, and you will continue to improve your land and pocket.

There are many more points on which I might comment, but I have already written more than I expected, and with one word more, Messrs. Editors, I will stop. You old gentlemen and farmers of the same section of country, whose heads are "whitened with the snows that never melt," who may chance to glance at this "green hand's first cruise" over the agricultural wave, don't smile and say nonsense. But remember though you have done nobly, and your day and generation has risen up and called you blessed, we who are to take your places will have to do better, for the world is growing wiser every day, and we must keep pace with it, or be left far in the rear. So come to our rescue with your experience, which, together with what little knowledge we may have gained by reading and observation, and with the *American Farmer* as our guide and counsellor, we may be kept abreast of the times.

West River, A. A. Co., Md.

I.

Making Good Butter.

Editors American Farmer:

I will try to give you my little experience in regard to making good butter. I will omit everything relative to the cows and their management, and speak only of butter.

Cleanliness is the first principle to be inculcated on the farmer in regard to milk, as we know that this article is a great absorber of particles

of any kind in the atmosphere where it is kept. During the Winter season the milk is strained, and kept in a room of even temperature, and as soon as the cream is ripe it is skimmed with a perforated dipper, which separates the cream more readily from the milk, and when the cream pot is emptied there is no whey remaining—the whey, in my opinion, often giving the butter a bitter taste.

The cream is put in a cool place and stirred often, and when ripe enough is churned in a "Blanchard Churn," which works the butter (after the milk is drawn off,) sufficiently to gather it. It is then put on a worker and thoroughly rolled until every particle of milk is out. It is never washed at any time; elbow grease is used instead of water. I have found by experience, that washing causes butter to get rancid, and not keep so well. The butter is then weighed and to 1 pound of butter $\frac{1}{4}$ of an ounce of fine rolled salt is added. It is then worked a few times to get the salt evenly distributed, weighed in $\frac{1}{2}$ pounds and set in a cool place until marketed. This is my method, and if there is any better, I have yet to learn it. I am only a novice and of course give my views as such.

Balto. Co., Md.

JOHN A. CONKLING.

Tobacco Plants.

Messrs. Editors American Farmer:

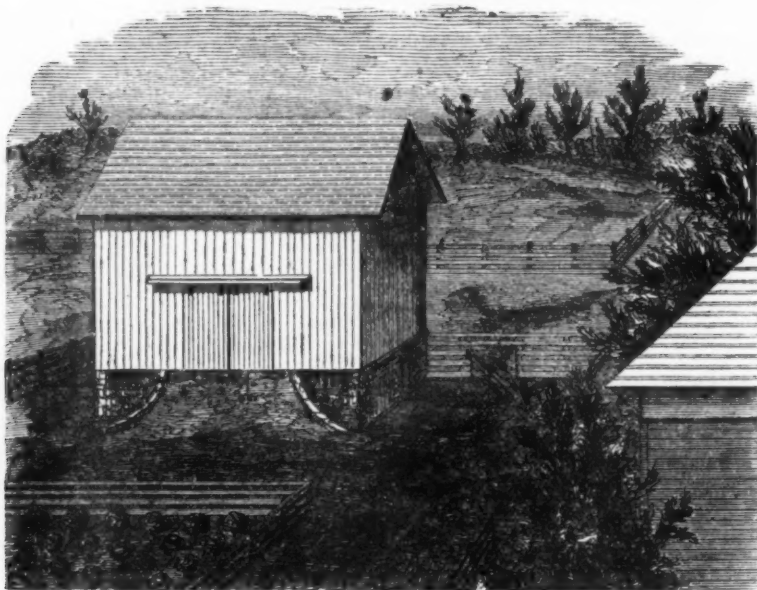
Being extensively engaged in raising plants of all kinds, among them tobacco plants, I think my plan of raising them much more successful than the old fashioned one: It is to select a good piece of ground—ground that has been worked in some hoed crop the previous season—plow it up as early as possible, drag it and put it in as fine condition as we can, and let it lie until such time as we are ready to sow—about the 25th of March—then repeat the same process over, sowing the guano before harrowing, finally leveling the bed with a log; we then run the bed off in rows about one foot apart with a marker; three or four rows can be run off at one time, running the first by line, to keep them straight and regular; we then sow the seed in drills right thick and tread in with the feet, treading the whole bed well over.

If the ground crusts over about the time the seed is coming up, we take an iron-tooth garden rake and rake right across the rows, also if the plants stand too thick. This removes a great many plants and many weeds at the same time. After the plants are up we commence hoeing them as soon as we can see the rows; very light at first, increasing the depth as the plants grow, the rows being much easier to weed than beds. I think any one trying this plan will find that they will have a much finer crop of plants than by the old one. Also that the plants whilst in the beds will stand the drought much better and are fit to set out earlier.

Having them in rows we have them under our control, and after the first drawing they are then hoed and weeded over again, which helps along the smaller plants, so that in a short time they are as good as the first pulling.

Baltimore Co., Feb. 7, 1881. R. VINCENT, JR.

A Farm Barn with Basement.



PERSPECTIVE.

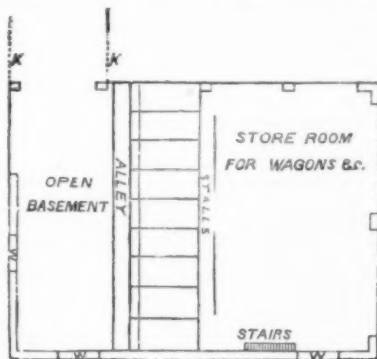
A subscriber in Charles Co., Md., asks us to give a sketch and plan of a barn suited for storing crops and accommodating farm stock. If a hill-side or basement barn is preferred, the accompanying perspective and plans may meet the views of our inquirer. The dimensions are 36 by 50 feet, but they may be changed to suit the conditions to be met.

A wall against a bank, from six to ten feet in height, requires a drain underneath two feet and a-half in depth, with proper inclination, and filled with small stones, with a throat of tile at the bottom, if the soil be of a wet or spongy nature. The base of wall three to four feet, and battened on the outside to width of barn sill at top; laid in lime and mortar, and (if the hill is pretty steep) with about one-fourth part water cement—otherwise the water will ooze through the wall, rendering the air of the stable damp and unhealthy. Be particular to lay up the back of the wall as smooth as the front, so that the frost may not get hold of the uneven edges or stones, to use as a lever to pry up or dislocate the wall.

In regard to the location of horse stables circumstances should govern; if the house (residence) is situated across the highway from the barn and on an eminence, and the barn floor is on or nearly level with the highway, the stables should be therein situated, using the cellar as a manure pit. If, as in the engraving, the barn is situated on nearly a level surface, and but a short distance from the house, the stables should be situated in the cellar or basement story. Many farmers object to basement stables, in consequence of the dampness that prevails. It is

needless to say that the dampness is caused mainly by improper construction of the wall, with little or no provision for ventilation.

The basement plan shows the manner of arranging the stalls. It will be observed that not

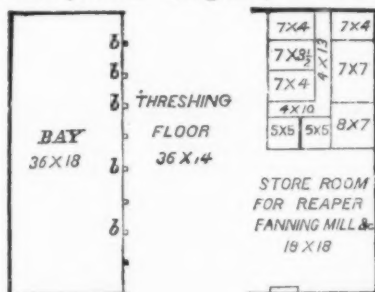


BASEMENT PLAN.

one comes in contact with the wall, which gives the air a free circulation. Store rooms for wagons are in close proximity. Horses may be unhitched while under shelter; or this space may be utilized in whole or in part for cow stalls. At the left is an open space which may be used for sheep, or for the cattle from the yard to remain under during inclement weather. Dotted lines K K indicate the location and width of shed, which, if many cattle or sheep are kept, it will

be desirable to construct. W W W windows in basement wall.

The thrashing floor of the main floor occupies a central position. The granary door is about



PLAN OF MAIN FLOOR.

opposite the point from which the grain is discharged from the machine; it is lighted by a window at the end of the alley.

Animals in the stalls below are fed hay by placing it in the shutters *b b b b*, which are provided with trap-doors. Store rooms and granary are each eight feet in height, covered with light floor for storing of hay or grain in the sheaf.

Our French Letter.

Management of Lucerne.

Messrs. Editors American Farmer :

The complaints so general of the non-success of red clover has drawn attention to lucerne as a substitute; in fact, the latter now exists in localities where it was unknown thirty years ago. The drawback to the successful culture of lucerne is the frost killing the young plants during the first year, and more to be dreaded as northern latitudes are approached. As Brunswick is noted for its successful cultivation of the plant, the mode in which it is there raised is as follows: It is a bad plan to sow lucerne either with Spring or Winter wheat, because the plants come up too sickly; a soil of good quality, having produced a root crop which had been well manured, receives, after the roots are removed, a tilling during the Winter to the depth of 10 or 12 inches, and an irrigation of liquid manure; in Spring the harrow and roller are employed, and if the land be poor in lime a small dose is to be added. Before sowing, the harrow is again employed; 36 lbs. of lucerne with 4 lbs. of red clover is sufficient seed for an acre, lightly brushed into the soil and rolled; the second fortnight of May is the best period for sowing; a first cutting of about two tons per acre will be yielded in September; the aftermath must not be cut, but left to protect the young plants during Winter. Under no circumstances must it be fed down. The first Winter no liquid manure is to be applied to the tender plants, the acids would be too strong, but a slight stroke of the harrow in Autumn and Spring will be advantageous. Thus followed, an excellent and permanent field of lucerne can be secured, and that will amply repay the cereal crop sacrificed during the first year.

Adulteration of Feeding Articles.

Rape cake is commonly adulterated with mustard seed, and to this cause a general belief attributes cows slipping their calves. A farmer addressed some adulterated cake to Dr. Hoffmeister, and demanded his opinion generally on the subject. He replies that 2 per cent. of mustard in the cake, far from producing abortion, aids favorably digestion. Prof. Richter, of Konigsberg, gave from one to one and a half ounce of mustard daily to heifers and cows in calf, without producing any objectionable results. However, stronger and continued doses, by provoking intestinal irritation, could bring about abortion. In Holland, Denmark, Sweden and Germany, hemp cake is employed in the feeding of oxen; in France it is chiefly employed as a manure for flax and tobacco. Hemp cake contains nothing deleterious, and the quantity of nitrogen found in it varies from 4 to 5½ per cent. Some experiments have been tried with the cake in the north of France for feeding black cattle, horses and sheep, and with success, save in the case of the latter, when it ought to be given sparingly, as it is a ration rather of an astringent nature.

Wool and Mutton.

The battle between wool and mutton growers is far it seems from being at its Waterloo. A. M. Leroy recently asserted that there cannot be found a flock of precocious merinoes that is not a loss for the owner. A very practical reply comes from Poland. Let it be observed *en-passant* that Polish agriculture is undergoing a successful revolution by the adoption of two French processes—trench preserving of green maize and the crossing of native breeds of sheep, by the precocious variety of merinoes peculiar to Edrolles, in the department of Aisne. M. Laszezynsky states ordinary Polish sheep are adult towards five years, weigh 88 lbs. and yield a 3½ lb. fleece; from a first crossing with Edrolles rams, the resulting progeny gave at one year of age the following result: Ewes, weight 114 lbs., and for the rams, 154 lbs.; average weight of fleece, 5½ lbs. Further, while the native breeds at the age of four years only sold for from fr. 15 and 18, the ameliorated stock at twelve months were disposed of at from fr. 38 and 40. Another variety of the precocious merino is the Soissonnais; one flock of this breed containing 200 rams contains an animal aged 16 months, which weighs 220 lbs., and a fleece estimated at 24 lbs.

Final uses of Old Horses.

In France when a horse has reached the age of 20 or 30, it is destined for a chemical factory; it is first relieved of its hair, which serves to stuff cushions and saddles, then it is slaughtered and skinned; the hoofs serve to make combs; next the carcass is placed in a cylinder and cooked by steam, under a pressure of three atmospheres; a cock is opened which allows the grease to be run off; then the remains are cut up; the leg bones are sold to make knife handles, &c., and the coarser, or ribs, the head, &c., are converted into animal black and glue. The first are calcined in cylinders, and the vapors, when condensed, form the chief source of carbonate of ammonia, and which constitutes the base of nearly all ammoniated salts. There is an animal oil yielded which makes a capital insecticide and

a vermifuge. To make glue the bones are dissolved in muriatic acid, which takes away the phosphate of lime; the soft residue retaining the shape of the bone, is dissolved in boiling water, cast into squares, and dried on nets. The phosphate of lime acted upon by sulphuric acid and calcined with carbon produces phosphorus for lucifer matches. The remaining flesh is distilled to obtain the carbonate of ammonia; the resulting mass is pounded up with potash, then mixed with old nails and old iron of every description; the whole is calcined, and yields magnificent yellow chrystal prussiate of potash, with which tissues are dyed a Prussian blue, and iron transferred into steel; it also forms the basis of cyanide of potassium and prussic acid—the two most terrible poisons known in chemistry.

Nothing in the way of a victory over the phylloxera, but the battle for their extirpation goes on hopefully.

Paris, Feb. 12, '81.

F. C.

Too Fat Hogs—Ensilage.

Editors American Farmer:

I enclose some clippings for your perusal, which I think of interest to the farmers of our country. The one about too much fat meets my views of the pig question exactly. We are breeding too much for lard, for blubber instead of lean meat, or muscle. Spring pigs kept in a close pen, and forced until killing time will be nearly all lard. It is certainly much better to let hogs have a moderate range, where they can exercise at will; there will be a better proportion of lean meat, and the meat will be firmer and make healthier food; the stench that arises from a close pig sty in hot weather is enough to sicken the whole family, and the farmer may lose more in doctors' bills than he will gain in his manure piles, and how can healthy meat be raised in such a stench? Is it any wonder that the great markets of the world are being closed against our pork? Is it any wonder that Italy, Portugal, Spain, Australia and Prussia have prohibited its importation, and France is much disturbed about trichina, and the probabilities are that the French market will soon be closed to our pork. It is worthy of remark, that while pleuro-pneumonia in cattle has reached the dignity of legislative action the diseases of the hog product are overlooked.

The subject of ensilage occupied considerable time in our late convention, from the fact that the ensilage man was there with a specimen of his product. To Robert F. Roberts we admit the credit of building or digging or making the first silo south of the Potomac. The product he exhibited did not smell like fresh mown hay, nor like green grass either, and he admitted that some of his cows would not eat it at first, and he also admitted that he fed some meal or chop with it, and he was not prepared to say whether it would make good butter or not.

The Boston Journal of Chemistry says, (and you know they know everything in Boston—the hub,) that for every ton of 2000 lbs. of ensilage there is 1700 lbs. of water, and nothing more; thus, we have to handle and haul and cut 2000 lbs. of green forage to get 300 lbs. of real food,

and besides the immense weight of the green forage there is also a tremendous weight of earth or stones to be put on top to keep the moss air-tight, and to be thrown off as the "cow kraut" is fed away.

Now Roberts claimed that he had about 70 tons of ensilage in his silo, then he must have had 59 tons of water, but as his object is to sell milk, not butter or cream, how much of this water might get into his milk would be hard to tell.

But seriously, it looks like a heavy work. It is just possible if 2000 lbs. of green fodder were dried it would make 300 lbs of good dry fodder that a cow will eat without a cultivated appetite.

For dairymen who live near large cities, and who wish to keep up their supply of milk through the Winter season, the ensilage business may be profitable, but for the average farmer who wishes to fatten his cattle for market, corn meal and good clover hay will not be soon dispensed with.

With thanks for the numerous good things in your last issue, I remain, respectfully,

ALBERT CHANDLEE.

Montgomery Co., Md., 2d Mo., 12, '81.

[The extracts our correspondent sends us refer to the bad name our pork is getting in Europe from the fear of its being infested with *trichina*; another to the alleged adulteration of butter in some of the large cities, notably in Chicago, and the third to complaints from Europe that American pork sent thither is too fat, and is yearly getting fatter. Our crowded space forbids our giving the clippings in full just now.

In raising pork it will never do for us to retrograde so much as to keep a hog eighteen months for the sake of getting a little more lean meat than can be obtained from the same pig well kept for half the time. We do not suppose there are any farmers or even laborers in any portion of the country where agricultural papers are read who do not patronize the local butcher to some extent for fresh beef or mutton occasionally. Besides, all families who live on a farm ought to raise an abundant supply of poultry, so that it need not be necessary to live on pork entirely, at the risk of losing more in doctors' bills than enough to pay the additional cost of getting a smaller amount of other food than the exclusive pork diet that was so strictly followed by the old settlers. As to the disagreeable smell, that is entirely unnecessary. We in the older part of the United States cannot farm without the aid of manure of some sort, and have no better animal to help in its manufacture than the pig, especially if he is one of the well bred sort, so that he will be sure to be worth more when fat than he has cost his owner. There is no better absorbent to use in a pig pen than dry earth, at the same time none more abundant on a farm. As to the market for our pork being likely to leave us, we think any one who has read our

daily papers for a few weeks past will soon have all fears removed, as the price is now about \$2.00 per hundred more than at this date in 1880.

On the "Ensilage" subject there is yet much to learn. With it, as in any "new departure," we will have many extravagant articles written on both sides, all of which tend to do great harm just as much from one side as the other. We do not advise any to make costly silos unless they have money plenty, but do advise some more careful experiments to be made on a moderate scale, as we feel sure it will be of great benefit to those who wish to keep a large herd of cattle on a small farm. See the results reported in this issue of the *American Farmer*.—Eds.]

Pyrethrum for Insect Parasites.

A lady correspondent from South Carolina writes as follows:

In the December number of the *American Farmer* Pyrethrum is recommended for the screw-worm. One of our cows had warbles, which I thought were screw-worms, and I tried the pyrethrum and it killed them directly. Two of our calves had gotten lice on them. On one of them I put the pyrethrum, with only my milker as a witness; but I was so struck with the quickness with which the vermin were killed that when I was ready to doctor the other I called out our minister, who was visiting us, to see how quickly they could be killed, and the result was the same. My mode of applying it was by taking about a tablespoonful and sprinkling some on their backs and sides, and leaving a little in the paper, burning it under them. Don't you think chicken mites ought to be things of the past? Your articles on diseases of domestic animals and their remedies are messages of mercy.

We found some difficulty in getting pyrethrum, but my father wrote to Charleston for it; and though we have no screw-worms it is infallible for lice and warbles.

A. P. J.

Cramp in the Stifle Joint.

I have a very fine Hambletonian colt, two years old last Spring. Some mornings when I go to the stable, I find her left hind leg perfectly stiff, and it seems to be impossible to bend it. In a few hours she gets over it and is as playful as ever for several weeks. She has never been sick or hurt. "Will you tell me what to do for her?"

Lancaster Co., Va.

JAS. RANSOME.

Ans.—Your horse is suffering with the above named disease resulting, as it is in the majority of these cases, from indigestion. The liability to its return will be completely removed by one or two doses of purgative medicine and alteration of diet. As a purgative give six drachms of Barbadoes aloes, one drachm of ginger and syrup or molasses enough to form a ball, to be given on an empty stomach after having been fed two days on bran alone. D. LEMAY, V. S.

Baltimore.

The Poultry Yard.

By G. O. Brown, Montvue Poultry Yards,
Brooklandville, Md.

Hints for the Beginner.—III.

Setting Hens, Coops, &c.

During March set as many hens as possible, as the March pullets will be the main dependence for egg production next Winter—and eggs in Winter command a price that make the right side of your balance sheet look cheerful and encouraging. Some of my neighbors got sixty cents per dozen for eggs last month. In setting hens this month place the nests in as warm a place as possible, as some of the nights are very severe, and it does not take much of chill to stop incubation completely. Early setters necessarily must be favored, and I have found nests will stand pretty severe weather if a folded newspaper is tacked on the bottom and sides of the nest. Do not make the common mistake of putting too many eggs under the hens in cool weather. Unless the hen is a *large* one, or the eggs very small—nine are sufficient. When the weather becomes warmer, as many as they can well cover can be given to them. I have found it to be a good plan to set several hens at the same time, and after they have been set about five days, go at night with a lantern and examine each egg, by holding it up in front of the light with one hand and holding the other hand so to shade your eyes as shown in the accompanying cut. If any of the eggs then appear perfectly

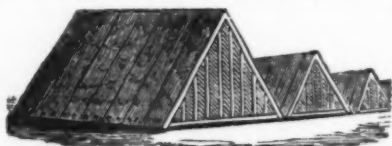


TESTING EGGS.

clear, entirely free from any cloudiness, they are barren, never having been fertilized. These eggs are in no way injured, and are by fanciers saved and boiled and fed to young chickens. By adopting this plan all non-fertile eggs may be removed, and if several sitters are started at once, perhaps enough unfertile eggs may be found to allow of giving one of the setters an entirely new setting of eggs. This plan will also save disappointment—to yourself and the

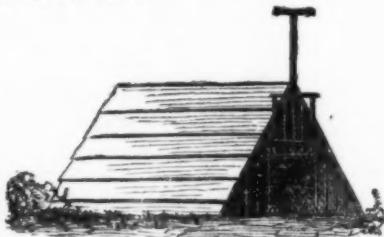
hen. I have found the best plan with setting hens is to have the nests in darkened places, and to fasten the hens up so they cannot get off, and then have a regular hour each day to go and let them off and feed and water, and let them dust. While they are off the eggs should be examined, and if one is found broken, it should be removed, and if the others should be smeared they must be carefully washed in tepid water.

If the nests have had a handful of flour of sulphur sifted through the hay, the chicks generally come out pretty free from vermin, but even with all due precaution, it is better to anoint the top, with lard, of the heads of all the chicks as soon as they leave the nest. After they have been hatched about twenty-four hours they are ready to be removed to the coops. There are various kinds of coops made, some convenient, some not. They should be made of light wood, so they may be easily carried by one person from one place to another. The old tent shaped coop is the one most generally used, such as we herewith give an illustration of. Care



TENT COOPS.

must always be observed in placing the coops so that the water will not run in them and drown the chicks. Sometimes it is necessary to place the coops on a southeast hill slope—no better place—and unless this precaution is observed sudden showers may be the cause of the loss of some entire broods. After the coops have been located thus on a hill side use a hoe and make a gutter around them so it will be impossible for the water to run in.



THE ECONOMICAL COOP.

The economical coop is same in shape as the tent coop, but the boards are put on the roof across instead of up lengthways. The first roof board is started at the bottom, and then the next should overlap on it an inch, and so on until the top is reached. A slide door made of lath enables the hen to go in and out at will after the chicks are a few weeks old. The hen should, however, in cool weather not be let out at all, and in warm weather not until the dew is well off the grass. The best practical coop for chickens that I have yet seen I saw at the yards of Hon. Geo. Colton. They were made as follows: Tent shaped, except there was a base board at the bot-

tom of the roof six inches high, and floors were made for each coop in this way: first a floor a trifle larger than the entire bottom area of the coop, then on that a second floor that the bottom of each coop fitted nicely over, so that when in use the inside floor was the thickness of the boards higher than the bottom floor, this prevented any moisture or rain from getting in. The floor was only intended to be used during rainy weather. Next month we shall have something to say regarding feeding young chicks—the way we have been accustomed to feed. Some of our remarks may necessarily be a repetition of what we have heretofore written, but our aim is to instruct new beginners, and our experience has been, that often those that know how to do things do not always do them, and an occasional reminder is of benefit in such cases.

Plymouth Rocks.

Editors American Farmer:

This breed of fowls is rapidly making its way into public favor throughout our country, chiefly on account of its intrinsic good qualities, and is pressing hard the large Asiatics, as when well cared for it will nearly rival them in weight and size, and in the estimation of many surpass them in *quality* of meat; it also is throwing down the gauntlet to the so-called non-sitting breeds in regard to the number of eggs, it being a good Winter layer, easily broken up when broody, and not wasting much time after hatching a brood before again shelling out.

It was originated by crossing the Dominique with the larger breeds, and retaining the best qualities of each variety used; it is the most suitable fowl for the market farmer, as, in addition to the large eggs laid the chicks grow fast, keeping plump from the shell, and in prime condition for broiling or frying, and fatten readily and dress heavy for the Fall and Winter trade.

Though clothed with a sober business suit, it is by no means devoid of beauty; a full grown pullet, fit for the show pen, its dark and light barring coinciding on all parts of its body, following the rounded outline of its prominent breast, making its abundant fluff more broadly developed on wings and tail, and tapering off in fineness as it mounts to the clear cut head, with its neat comb, yellow bill and clear bright eye, all surmounting a pair of clean, strong yellow legs, holding itself proudly erect as it sings its cheerful ditty concerning eggs to come, is a picture that the fanciers of this variety place second to none.

The standard weights are nine to ten and a half pounds for the males, seven to eight and a half for the females, though surpassed in many instances.

It fattens readily, in fact is always in good condition, and care has to be taken in feeding, lest the breeding birds acquire too much useless fat, thus impairing their productiveness and the fertility of the eggs.

T. W. H.

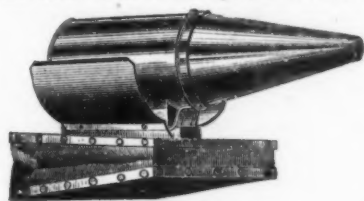
[This correspondent, formerly a near neighbor of ours, has birds which justify his praise of the breed.—*Eds.*]

Transferring Bees from Box to Movable Comb Hives.

This operation is so easy and simple—if you go about it in the right way, and at the right time—that every bee keeper can do his own transferring, and do it nicely, if he will but *try*; even if not experienced it will only take a little more time. I said last month April 1st is about the best time, but a safer date would be *just when the trees first begin to blossom*. This can be set down as a proper time for *all* locations, and there will be less danger from attracting robber bees, if the operation is performed in the open air.

Provide a box, as near the size of the hive to be transferred as possible, for a forcing box, into which the bees are to be driven; a table (or box) on which to cut the combs, and a piece of board (two feet long and about fifteen inches wide) on which you cut the combs after cut out of the old hive; pieces of duck bags, or old cloth, to cover the board to prevent the brood from being injured by bruising; a long knife for cutting out the combs; another sharp one for cutting the combs in the frames; a hatchet and old chisel for cutting the nails in old hives; a saw, some splints, tacks and string, for securing the combs to the frames till made fast by the bees; a basin of water to wash the honey from the hands and knives from time to time, and a towel.

The very best thing I have ever used is a set of wires, cut just the length of the frame, with holes drilled at either end, in which a screw or tack can be placed to screw it to the ends of a frame. If these wires are provided no splints and strings will be needed. I have four wires to the frame, or forty to the hive. After the comb is cut to just crowd into the frame, tack two or three wires on each side the comb, at such a distance as will keep the comb from breaking. Sweep clean a good space near the hive to be transferred, so clean you could find a pin should you drop one, turn down about a bushel of saw-dust on this spot, and scatter it so



THE SMOKER.

the hive into which the bees are to be transferred will set firmly upon it, and so close that no bees can get under the hive but will run into the hive as they are brushed from the combs.

Having made all the preparations beforehand, select that part of a warm day when most of the bees are at work; about 10 o'clock A. M. to 2 P. M., is the best time; with a smoker puff a little smoke into the old hive to drive the bees up among the combs, and immediately take the hive from the stand and set it alongside the new one *inverted*, on which you place the forcing box. Now place on the old stand an empty hive, like

the other in appearance as a decoy hive, into which the bees returning from the fields will enter, and it will serve to keep them quiet while you are forcing the swarm. With a few small rods, or a piece of lath, rap upon the old hive, and in a few moments you will hear a loud humming. Should any feel disposed to fly out of any small opening, send them back with a blast of smoke from the smoker, or you can stop all cracks with paper, rags, leaves, or whatever you have handy, so not a bee can escape; continue the rapping for about ten minutes, or longer, when most of the bees will be clustered with their queen in the forcing box. You can now carefully lift it off, and after removing the decoy hive on the old stand, set it down, raised a little to give the bees plenty of air, and all the bees from the decoy hive will speedily enter. With the hatchet and chisel cut off that side of the old hive that will leave the *face* of the comb towards you, after sawing off the *cross* sticks and cutting the combs loose from the sides of hive with the long knife, care being taken not to get any honey to running, or you will induce robbing, in which case you would have to go to some room and complete the work. After removing the side of the hive, turn or set it so the combs will set on edge, to prevent breaking. Now cut loose the first comb, cut slowly and *snug* to the parts where the comb is attached to prevent any honey running, cut also around the cross sticks in like manner; the comb being liberated, lift it carefully to the prepared board made ready to receive it. Now take the frame and place it over the comb in the manner in which it was cut from the old hive; that is, the honey at top of frame, cut it a little larger than the frame, just so it will crowd in; care also should be observed in cutting the combs to save all the brood, and rejecting all the drone comb, or the comb with large cells. Better reject the honey also rather than sacrifice the brood, as it can be fed back after the bees get all quiet in their new home. Having cut the comb into position now tack on the wires, or the splints, or tie them on, as you may have made preparations.

In turning the comb care should be taken *not* to lift the frame or it will fall out, but raise all—board, mats and comb—from a horizontal to a perpendicular position, when the weight of the comb will then be on its edge and the danger of breaking out avoided. After securing both sides hang the frame in the new hive. Should any bees be clustered on the combs as you cut them from the old hive take a quill and gently brush them off before the new hive and they will soon run in. Proceed in this manner till all the combs have been cut into position, and be sure to have the brood occupy as nearly the same position it occupied in the old hive; that is, all together, that the bees may cluster over it and prevent chilling, which would be ruinous.

After all the combs have been cut and hung in the hive equalize the space between each comb, and place on the mat a honey board, lift the forcing box from the old stand and with a quick jerk shake the bees directly in front of the hive, and as they crawl toward their new home watch for the queen, and as they run over the edge of the entrance she will readily be noticed if with the bees. After they have all run

in, lift the hive carefully and set it on the same spot it occupied before. All *daubed* pieces of comb and bits of honey can be placed under the cap on top of the frame the next day, when they will speedily be cleaned by the bees, after which they can be removed, the clean bright pieces being saved for "starters" for the sections, and the dark and drone comb consigned to the wax extractor to be melted up.

If sufficient honey has not been cut into the frames in transferring, you should feed them or they might starve. Look well to this part of the operation; feed on top of the hive under the cap, and make it *snug* so no robber bee can get a taste of the honey. At the end of ten days open the hive and remove the splints or wires. Now look and see if there are eggs in the cells, if none are seen and you don't see the queen, look for *queen cells*, or "royal cells," as they are termed.

It sometimes happens the queen gets injured in transferring, or gets lost or killed, and they will be sure to have these cells at this time in such a case; cut out all but one, selecting the largest and most prominent. These cells will readily be known by their having the appearance of a peanut and hanging perpendicular on the comb.

Should you wish to *Italianize*, this is the very best time, provided you can get queens. Cut all the cells out if you have a queen ready, cage her for twenty-four hours, when she can be safely liberated. If you see plenty of eggs and sealed brood when you remove the splints, you can safely conclude the queen is there, and no further care will be necessary. If you raise a queen it will be necessary to again open the hive and see that her royal highness gets back from her wedding tour. In this case at the end of three weeks would be about the right time to look, when she would probably be laying, if drones have made their appearance. Should she be *lost* during her flight it will be necessary to at once introduce a laying queen, as the colony would be now reduced in numbers and no profits could possibly be received from such a colony this season, unless very populous when transferred.

C. H. LAKE.

Sunny Side Apiary, Baltimore.

THE growth of the country and the large additions to the national wealth during 1880 are strikingly illustrated by the products of the soil, of which we raised 475,000,000 bushels of wheat, 1,500,000,000 bushels of corn, 413,000,000 bushels of oats, 24,000,000 bushels of rye, 40,000,000 bushels of barley and 6,000,000 bales of cotton, to say nothing of tobacco, sugar, rice, hemp, hay and other crops, and hog and dairy products, which yield an immense sum of money in the aggregate. In plain words, the United States now raises enough to feed her own 50,000,000 of people, and to supply the deficiency of the balance of the civilized world.

PROF. RILEY says that kerosene or oil is sure death to insects in all stages, and the only substance with which we may hope to destroy their eggs. Oil will mix with milk fresh or sour, and thus may be diluted to any desired extent.

Horticulture.

The Apricot.

Messrs. Editors American Farmer:

One of the most delicious fruits in cultivation is the Apricot, yet we find it in this latitude but little grown, and when cultivated, with very indifferent success. Before venturing a remark on its cultivation, let us inquire where it comes from, trace it to its native habits, and we shall then more likely find out its requirements. It is native of Syria, Asia Minor, Persia, and other countries having a warm arid climate. In those countries we read of the Apricot growing freely and bearing profusely, quite as free as any of our ordinary fruits—the apple, peach, etc. It follows, that to cultivate this fruit successfully it must have a climate similar to its native home. Along the shores of the Mediterranean it succeeds well, but as we go north success diminishes until we reach say the centre of France, where it is still to be found as an orchard tree, but not with the success met on the shores of the Mediterranean. If an orchard is examined we shall find dead branches and occasionally dead trees, though not to as great an extent as in this country. Passing further on till we reach the latitude of Paris, when there we find it grown on walls, under glass, and requiring protection; likewise in Great Britain, though in the south of England, as in the vicinity of Paris, some of the hardier varieties will perfect their fruit as standards. The Apricot succeeds well in south Africa, Australia, Southern California, New Mexico, etc.—all dry, warm climates. Need we be surprised when transplanted to the rich, moist alluvial soils of our valleys, that it soon catches the prevailing disease—*chills*? True, it may not show it in the same way as man, yet it is evident to any person going into an orchard in such localities and seeing the yellow appearance of the trees, gummed and dead branches—dead trees.

It follows from the foregoing that to grow Apricots successfully, a dry, sandy, warm soil, not over rich, nor yet the reverse, but moderate. Occasionally we find trees in our city yards doing finely. Let us examine, and try and ascertain to what success is due. The trees had been planted close to the house, well sheltered, the roots most likely rooting close to the wall or perhaps under a brick pavement—dry and warm—approaching in a measure the conditions of their arid sunny home, with just sufficient warm soil to nourish them. In such positions the tree will grow vigorously, continue healthy and bear abundantly. I have seen many such trees in this city, and have seen them farther north—in the state of New York—in just such positions breaking down with the weight of their golden fruit. It follows from what I have written I attach more importance to having the roots in a dry, warm position, than I do to the position of the tops, though the latter should have all the benefits of our warm suns, and will be all the better if well sheltered.

Washington, D. C.

JOHN SAUL.

[Mr. Saul has our thanks for his suggestive communication. The fruit-grower who can send plenty of apricots to market in our large cities may count on a moderate fortune.—*Eda.*]

New Fruits, &c.*Messrs. Editors American Farmer :*

I give you herewith my experience with several of the newer fruits, etc., of the past season. Perhaps some of the readers of the *Farmer* would like to know how the Elvira grape behaved last year. Its bearing qualities on five year old vines was beyond my expectation, the bunches being greatly enlarged over former years; in fact, it is the most productive grape I ever saw in Europe or in this country. It will produce more wine to a given space, and the most salable wine of any grown. It has, it is true, its fault, namely, the cracking of some of the berries. You cannot let it get dead ripe on that account. The must showed 80° on the Oessle scale.

The Uhland is a spicy little grape, but the reverse in bearing of the Elvira. Spur pruning on four or six arms to a plant will be the only way to make it pay. Its must showed 110°.

Noah is a large handsome white grape, with rather hard pulp, but showy for the market.

White Hall is an early, large and fine looking black grape of poor quality; whilst Brighton and Lady, somewhat older grapes, proved satisfactory last season.

Amongst strawberries, the Sharpless has come fully up to its reputation.

Of raspberries, the Cuthbert is a large berry, but I do not think it will drive the Brandywine out of the market, on the account of its being of a darker color.

The St. Patrick Potato is an improvement, and for the past two seasons has done finely with me.

Amongst bedding out plants, the Acalyphas surpass all others as foliage plants for Summer decoration; and amongst the grasses, the variegated Pampas and one from the Himalaya mountains are great advances on older sorts.

Balto. Co., Md., Feb. 21, '81. JOHN COOK.

Grapes for the Middle and Southern States.

Prof. Hsumann in his work "American Grape Growing and Wine Making," gives a list of hardy and productive grapes that do best between latitudes 36° and 42°, and to which I have made a few additions.

FOR TABLE AND MARKET.—Perkins, Massasoit, Wilder, Martha, Elvira, Lindley, Concord, Telegraph, Gæthe.

PROMISING WELL.—Lady Aminia, Black Eagle, Defiance, Essex, Pearl, Beauty, Amber, Trumpet, Duchess and Moore's Early.

FOR WHITE WINE.—Martha Elvira Perkins. *Promising*.—Amber, Pearl, Beauty, Uhland, Transparent.

FOR RED WINE.—Cynthiana, Norton's Va., Hermann. *Promising*.—Hermann's Seedling.

It is well known that most of our northern grapes are the Lebrusca or Fox Grape variety. These do the best at the North; while in the middle and southern states the *Cordifolia*, and still further South the *Astevalis*, are the best varieties.

One reason of this is the Lebrusca have shallow growing roots, and the great heat of the more southern climates injures them, causing rot, etc., while the *Cordifolia* growing deeper are not so affected.

Types of the *Cordifolia* may be seen in the Elvira, Amber and Beauty.

A gentleman in Hagerstown, Md., is grafting his Concord (on account of the rot) with these varieties.

The *Cordifolias* are good table or wine grapes. G. F. NEEDHAM.

Washington, D. C.

Native Wines.*Messrs. Editors American Farmer :*

I have read with much interest L. G.'s communication on the above named subject in your February number. Ten years ago I was asked on two occasions by gentlemen fresh from England, what industry I would advise them to pursue here in Virginia. I replied, buy some land and plant it with vines; if you can hold on until they come into bearing, it will pay you well: they followed my advice, and both of them inform me they are well satisfied with results so far. For five and twenty years I was engaged as a *wine-seller* in the old country, and it has occurred to me, that one or two remarks on the quality of American wines, from an Englishman's point of view, may not be unacceptable to your readers. I think then it is a mistake at present, trying to make pure wine; by this I mean, making a wine that will keep without the addition of alcohol. The taste of Americans in regard to wine is more like that of Englishmen, I take it, than that of the natives of the various wine countries of Europe, and being so, Americans require a strong full-bodied wine, in order to supply that stimulant which they now get as a rule from spirits. I would therefore endeavor to make a good, sound, rich sherry, and this can be done I presume by diminishing the fermentation, and adding as much pure brandy as is necessary to keep it, and give it strength likewise; just as is done in Spain in fact at the present time. I think, by way of encouraging this industry, that your government should allow a drawback of the duty upon all spirits used in this manner, guarding of course against the abuse of it, which could very easily be done. I believe that the grapes grown here, and made into wine as they do in Spain, would produce a wine equal to the bulk now sent to England, from that country, and as our object must be to produce an article acceptable to the million, (i. e. supposing the supply increases in the ratio mentioned by L. G.) I contend that you would find no difficulty in disposing of all the wine you could make of the class I advocate, provided, you offered it at such a price as brought it within the means of the working population of this country.

I have read that the plan I suggest was at first adopted by the wine-growers around Cincinnati, and that it was found to be a mistake; but *why* was this so? Because this home-made port and sherry was offered in competition with the for-

eign article to those who could afford to purchase the latter, and whose tastes had become habituated to its use; but it is not to such we must look for customers, but to the great and rapidly increasing mass of persons who are the chief consumers of whiskey and other spirits, and who *will* have some stimulant, let teetotalers condemn as they may. It will take two or three generations probably to educate the American wine-drinker of the present day into a taste for pure native wine, such as is now made; but turn out a good rich brown sherry from your wine cellars, *at a low figure*, and—my word for it—it will “go like wild-fire.”

I presume no license would be required for the sale of these wines by retail, so that as in England, every grocer who chose to do so ought to offer them for sale. Say that a large wineglassfull could be bought for five cents, would not all temperate drinkers prefer this to going into a whiskey saloon; and year by year the custom of doing so would increase, and the taste for native wines also.

Orange Co., Va.

T. L. HENLY.

Norfolk, Va., Horticultural and Pomological Society.

This Society at its annual meeting, January 29th, celebrated the completion of its fifteenth year. The President, Mr. G. F. B. Leighton, delivered his annual address. After referring to the efforts of the Association to secure the placing in the free list of peas imported for seed, which are charged with 30 per cent. duty, whilst those admitted for consumption pay only 10 per cent., and urging a general plan of meteorological observation, and crop reports, such as has since been adopted, he continued:

We are able to note an improvement in the line of fertilizers. Legislation, closer observation of results, with an increased tendency to home manipulation of chemicals and utilization of what the farm furnishes, places the article of commercial fertilizers on a safer footing than formerly; yet there is abundant room for further improvement.

There has been a marked improvement in the production of hay within the past fourteen years. The impression then being that this was not a hay country, while the past ten years has developed the fact that our stiff lands produce hay of superior quality and yield.

During the period since our organization there have been surprising changes. A few small steamers answered the wants of all transportation of our products; the changes from that period to the present have been so steady and gradual that we cannot comprehend the full magnitude of what has transpired, without taking a leap of fourteen years, to find those small steamers supplanted by magnificent floating palaces of five times their capacity, and still the cry is for more tonnage. This Society has been the medium of collecting the statistics of the

trucking and kindred interests of which Norfolk stands so prominently before the country.

I have been unable to reconcile the reports of truckers that they are not making money with the fact that they are annually increasing their products, and to no small extent as evidenced by our transportation lines.

On a former occasion I suggested that if the number of our New York agents could be reduced to from twenty-five to forty, (instead of over two hundred) that our produce would be controlled in such manner as to make a net return of at least twenty-five per cent. above existing arrangements.

The Patrons of Husbandry having their organization among us, and embracing the largest portion of our truckers, I again leave the matter to their consideration and action.

The severity of the weather for the past eight weeks, and the extremely dormant condition of the fruit buds, point encouragingly to an abundant fruit crop the coming season. From the same cause we may expect a diminution of destructive insects which have proved so disastrous to the green crops the past season.

Two Good Plums.

The plum, owing to the curculio, is too much neglected. From this pest it seems to suffer much more in some soils than in others. The only remedy ever found effectual against its ravages is constant jarring from the time of blossoming until the fruit is well set, catching the insects which fall from the tree in sheets laid under it, and destroying them. The best time for this operation is early in the morning.



COE'S GOLDEN DROP.

early part of September in this latitude, and is a handsome and valuable sort.

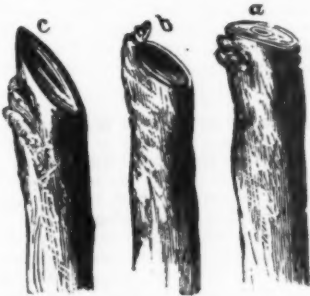
Fellenberg (Italian prune) is of medium size, oval in shape, and of deep purple color. It is very productive, and a desirable plum. It is a sort well adapted for drying, and the tree is of free, or even robust growth. Plum trees ought not to be neglected, as this treatment invites the black knot.



FELLENBERG.

The native plums, like the Wild Goose, Bassett's American and Mooreman, are more exempt from the curculio and are hardy and productive sorts, worthy of cultivation on account of their greater reliability as croppers.

Pruning—Making the Cut.



In pruning branches from trees with the knife, the method of making the cut is a matter of importance. We give two illustrations, showing different ways, often followed, which are wrong, however, and the one which is right.

Figure *a* shows the right method of making the cut, at an angle of 45 degrees, having the bud at the back, in the best position for throwing new bark and wood over the wound. Figure *b* shows too much of the wood cut away, leaving the bud exposed, and liable to death by drying or freezing. In the branch shown by figure *c* the cut was started right, but owing to a dull knife, or want of firmness in the hand, the cut was made too sloping.

Pleasure Grounds and Greenhouse.—
March, 1881.

By W. D. BRACKENRIDGE, Florist and Nurseryman,
Govanstown, Baltimore Co., Md.

Lawn and Pleasure Grounds.

It is much easier to lay out plans for work to be done under one's own supervision than it is to give instructions on paper how others are to perform the same kind of work in all its details. For instance, if we were to say that about the beginning of the month a piece of land should be prepared for tree planting, or that a piece of ground be plowed or dug over, to be afterwards seeded down as a lawn, we would not have it to be understood that the time stated is not as much to be taken into consideration as the condition of the ground when the planting or seeding ought to be done, and that is when in a friable condition, and a week's delay until it is in that condition will be no loss of time.

Many years ago we began planting a large square with ornamental trees, the ground being then in prime condition, but when about one half had been planted a heavy fall of rain overtook us, putting a stop to the work; but this was resumed again sometime before the ground was in a proper condition, and the result of this hasty action was that the trees last planted failed by at least one-third in the growth they made, as compared with the lot first planted; in fact, the result proved unsatisfactory up to the time the trees were ready for sale, which was about three years after planting. The like effect is also pro-

duced under the same circumstances in the seeding down of lawns, as well as committing seeds of any kinds to the ground, which should always be dry enough that it won't stick to the roller; we believe in the practice of having the ground pressed close to all newly sown seed.

Where the grass on lawns has become thin, the result of the ground being shallow or poor, a top dressing of some rich compost should be applied early in the month, and after smoothing it down with the rake sow over it a little white clover seed, and finish by running the roller over it. Some people use stable manure as a top dressing, but this very often contains seeds of obnoxious weeds, which spring up, and give rise to much trouble. Where good compost cannot be had ground bones or wood ashes will produce a good result.

During the month a general overhauling of trees, shrubs and hedges should be made. We trim our Arbor-Vitæ hedges about this time, and never go over them a second time during the summer. Privet, *Pyracantha*, *Pyrus japonica* and Buckthorn hedges we trim twice in the year—say sometime during the Winter and then again in July.

In the matter of pruning flowering shrubs at this season of the year a little discrimination is necessary. Some should have only the dead wood taken out, and the points of the straggling or overgrown shoots shortened back, and this system will apply to most kinds of *Spiræas* and *Wigalias*; while on the other hand *Altheas*, *Bourbons*, *Tea* and *Hybrid-Perpetual Roses* will be benefited by close pruning, and this, perhaps, in a greater degree the present Spring, owing to much wood having been killed by the severe frosts of the past Winter.

Ayrshire, *Noisette* and *Prairie Roses* to have them flower well, cut out some of the old wood and shorten back very sparingly the growths of last year.

Herbaceous perennial plants, as *Phloxes*, *Spiræas*, *Pæonias*, &c., (and for farther list of kinds see page 23 of the January number of *The American Farmer*), that have stood long in one place and exhausted the ground should be taken up, divided and replanted; if in a new locality so much the better for the plants; but if they are to be returned to the same bed, then some well-rotted manure and fresh earth ought to be added; but avoid planting where the roots of shade trees will interfere as robbers of the soil.

All Tulip and Hyacinth beds should have the Winter cover partly removed, and the surface of the bed loosened up to the depth of an inch or so.

Beds and flower borders not attended to in the Fall ought now to be manured and forked over; and should your taste run on annual plants, or lack of means prevent procuring Summer bedding-out plants from a greenhouse, then we would recommend that so soon as the ground gets warm to sow in lines or masses *Eschscholtzia Californica*, *Double Rocket Larkspur*, *Phlox Drummondii* and the various kinds of *Double Portulaca*, using the thinnings of the last two kinds to fill the Tulip and Hyacinth beds after the bulbs of these have been taken up.

Among the many pleasant things connected with a country residence is to have one or more Summer houses—better known as arbors, and

we would locate these in an airy situation, not too far removed from the dwelling, but so placed as to command a view of some object or objects that are agreeable. Such structures should be open on all sides, and have for protection from the sun a screen of Honeysuckle, Clematis and Wistaria trained up to the eaves, with a Sweet brier bush planted to windward. A border of Lily of the Valley, Hardy Blue Violet and Cowslip all around such an arbor is very pleasant and becoming.

A farmer of even very limited taste could at leisure times very easily erect such arbors, for it is not a difficult task to find eight suitable posts, say eight feet high, with a few cross bars as sills to support the roof; these, with the additional cost of 500 shingles to cover it in, and a rustic seat formed of the crooked stems of the wild Laurel (*Kalmia*), is all nearly that would be necessary.

Such places are very desirable places of retreat from between hot walls in sweltering Summer days, with book or newspaper in hand to luxuriate for a short season. We know of some farmers who have and appreciate such bowers, but we are unable to comprehend why so few have them. Do try, friends, to make things about home pleasant.

Brush, leaves, stumps, stones and all unsightly objects should be removed; on entering within the confines of a homestead, and by casting a few glances around, it is easy to determine by the order that prevails what kind of management it is under. System is what is required in all departments of life, and in none more so than horticultural pursuits.

Greenhouse.

Where a large stock of bedding-out plants is wanted the propagation by cuttings and seeds should be attended to now; a mild bottom heat will cause the rapid emission of roots, and so soon as these are made place the plants singly into small pots, afterwards keeping them in a warm shady place for a few days.

Just about this time the greenhouse ought to be radiant with flowers, consisting of Camellias, Azaleas, Carnations, Hyacinths, Acacias, Chinese Primroses, Pansies, Roses and Calla Lilies; even a small sample of each of these, when well grown and artistically arranged, and relieved by a few graceful ferns, cannot fail to produce a beautiful picture; it is quality and style of arrangement that usually attracts attention.

This is a very good season to shift Camellias into larger pots; a good compost for them consists of two-thirds turfy loam, the other third may be in equal parts of sharp sand and well-rotted cow manure. The pots for flowering plants should be well drained, and in order to keep such drainage open place a layer of about one inch thick of sphagnum over it before putting any earth in. After shifting keep the plants close and moist for a few weeks. Grafting and inarching may be performed with success at this season.

Those who have Cinerarias and Calceolarias under their care ought to see that they do not get pot-bound—that is, not to permit the roots getting matted inside the pot by keeping shifting into larger ones until a six or eight inch pot is reached, in which sizes they are usually flowered.

Both delight in plenty of light, and a cool, rather humid, atmosphere; but care must be taken to subdue the green fly, to which they are subject.

Towards the end of the month a number of plants can be moved from the greenhouse to the cold frames or pit.

W. D. B.

Forcing Heliotropes for Winter Bloom.

When we take into consideration the great quantity of flowers which can be cut in a small space from Heliotropes when properly grown, their delicious fragrance and universal popularity, we are surprised at the small amount of their bloom usually found in amateur collections. For the benefit of those who, having greenhouses, can find reason to complain of the scarcity of bloom on their Heliotropes, I will undertake to give the method by which from a small space I am enabled to get these flowers in large quantity all through the Winter.

In the first place, I would say that nothing but young plants are fit for forcing in pots. Do not be tempted to lift an old plant in the Fall, as it will be utterly worthless so far as flowers are concerned. All our flowers are cut from plants growing in four inch pots, and we never put Heliotropes in pots of a larger size, as our experience has fully shown that we can get more flowers from the same space occupied by the four inch size than we can from the same space with larger pots. We make preparations for our first batch of Winter Heliotropes about the 15th of August, putting in at that time as many cuttings as will give us plants enough for our Christmas supply. We put in another batch of cuttings a month later, and a third lot in October, which finishes our propagation of this plant for the whole year.

As soon as the rooted cuttings are potted in two inch pots and placed near the glass, but shaded slightly until the weather grows cooler. As soon as they get fairly into growth we pinch the tip of the growing shoots to render them compact and bushy, and when the plants are well established and the little pots full of roots, they are shifted into four inch pots and placed where we want them to bloom, which should be close to the glass in the warmest and most sunny place to be found. If properly cared for, the first batch of plants will present a sheet of bloom by Christmas or a little earlier, by which time the later propagated plants should be in their blooming pots and coming on for a succession.

As soon as the flowers are cut from the first lot cut the plants down to three inches above the soil, turn them out of the pots, shake the soil from the roots, and repot in the same pots with fresh soil. Return them to their place on the bench and water moderately until the buds start to break again. These plants will give another heavy crop of flowers about the first of March, while the later lots will be filling up the interval. After the second bloom is cut, the plants are again cut down close to the pots, but not shifted, as we want now a short compact growth to fit them for bedding out in the garden in May for Summer bloom.

This completes the round of the year, as our plants for the following Winter are from cut-

tings taken from the open ground in August. These cuttings should be the tender tips of growing shoots, not more than two or three inches long. By our practice we are enabled to cut *Heliotrope* flowers by the peck all winter long from a table four feet wide and fifteen feet long. Among all the lists of varieties the only sorts we consider worth growing are *Lizzie Cook* and *Snow Wreath*. Many sorts of *Heliotropes* are so rank and straggling in their growth as to be utterly worthless for flowers. *Lizzie Cook* is a seedling, I believe, by Mr. Anthony Cook, of Baltimore, and is the best of all dark *Heliotropes*. *Snow Wreath* is almost pure white, very compact and dwarf, and is the earliest and most profuse bloomer of any *Heliotrope* I have ever grown.

I do not claim this method of forcing *Heliotropes* as original, as it has been long practiced by some of our best growers. To be successful with it, however, a sunny house and a constant high temperature are essential.

W. F. MARSEY.

Hampton Gardens, Feb. 23, 1881.

A Chapter on Lilies.

Messrs. Editors American Farmer:

I desire to say a word about bulbs, and their cultivation. Their varieties are so great, colors so varied, and their time of blooming can be continued so long—from June until September—and most of them require so little care after they are planted, that I often wonder that they are not more generally cultivated. Perhaps it is because their nature is not generally understood. The good book says "consider the lilies, how they grow." Now to grow lilies to perfection, and to give you the most satisfaction, you must not plant them in very wet soil, nor in a very dry one—a happy medium between the two suiting them best. If the soil is wet they will be apt to rot, and if dry the blooms will not be so good. To prevent evaporation, the best thing to do is to mulch the ground around them either with tan-bark or short grass (cut from the lawn) to the depth of three inches. This will prevent the drought in a great measure during our hot dry Summers from injuring the bulbs, and will cause them to continue much longer in their gorgeous beauty.

One most important point in preparing a bed for lilies is to see that it is dug very deep, and made very rich with well rotted stable or cow manure, for they delight in a rich soil, and if let remain in the same place for some years they will soon fill a bed completely. By planting them about one foot apart, and in Winter covering the same all over with about three inches of manure, their size and beauty will increase each year.

If your ground is low I would recommend that you raise it about one foot high in the centre, so that the water in Winter will run off conveniently, and not lodge around the bulbs, which would be most likely to rot the tender ones.

I will enumerate some of the best and most easily cultivated kinds, any of which may be obtained from our first-class plant growers. Some

are high priced, owing to their scarcity, although most of them can be purchased at quite reasonable prices.



LILIAM AURATUM—PLANT AND BULB.

At the head of the list I shall place *Auratum*, the Golden Lily of Japan, which is of enormous size and most exquisite fragrance. It is admitted the finest of all lilies. *Candidum* is the common but beautiful white lily. *Canadense flavum*, has a bell-shaped flower, yellow spotted, not reflexed. *Canadense rubrum* has the flower most richly colored with red, the petals spotted with orange yellow; stem about three feet. *Chalcedonicum Major*, (scarlet martagon,) is a very brilliant scarlet; flower stem about four feet. *Colchicum*



LILIAM SUPERBUM.

is citron yellow of very bright color, with large pendulous flowers, in shape and style like *Candidum*, and one of the finest lilies. *Excelsum* is nankeen yellow, quite tall growing and most

excellent for a back row, or good to mix with any tall growing plants. *Krameri* is a variety allied to the *Auratum*; with the flower of soft rose color, and fragrant. *Hansoni* is a distinct and rare species, having small orange yellow flowers, brown spotted, of a thick texture, continuing a long time in bloom.

Lancifolium (speciosum) Album is white; *Roseum*, rose spotted; *Rubrum*, white, red spotted; *Punctatum*, white, salmon spotted; *Monstrosum* Album is pure white; *Monstrosum Rueruna*, red spotted.

Longiflorum, one of the earliest to bloom, having long trumpet shaped pure white flowers six to eight inches long, and of very delightful fragrance, much used by florists for forcing for Winter flowers, and one of the best.

Superbum is one of our native species, and, when well established in good rich soil, it will produce more than fifty very beautiful flowers in the form of a pyramidal cluster.

Brownii has flowers trumpet shaped, about six to eight inches long, rich creamy white inside, outside a rich chocolate brown; this is one of the most desirable, very scarce and of high cost.

Tigrinum (the tiger lily) is orange scarlet, black spots, recurved petals. Double *Tigrinum* is like the last with double flowers. *Umbellatum* has several named varieties with brilliant red variegated flowers in clusters.

The following are California lilies, said to be very fine and presumably hardy in this section: *Columbianum*, (new); *Humboldtii*, *Parvum*, *Pardalinum*, *Washingtonianum*, and *Parryi* is the last having a clear golden flower, borne on a stalk from two to five feet high. A well established plant will produce twenty flowers, and it is perfectly hardy and quite a desirable sort. There are many others that might be here named, but as this article has attained such length I fear the patience of your readers may become exhausted, even if you have room for it in your valuable magazine. At some other time I may take occasion to say something about other varieties of bulbs, the flowers of which are great favorites of mine. There are so many to choose from that it has often been a matter of surprise to me that they have not been more generally used for decorative purposes in the garden.

OBSERVER.

[For the lily cuts which illustrate the above article, and that of an aquarium, on another page, we are indebted to Mr. L. B. Case, of Richmond, Ind. editor of the *Botanical Index*, a valuable bi-monthly magazine devoted to botany and horticulture.—Eds.]



LILIUM BROWNII.

Floral Novelties.

Messrs. Editors American Farmer:

I propose to notice and remark on some of the most valuable and popular recent acquisitions in floriculture, termed by their introducers "Novelties."

A lesson which is learned by all flower lovers in the course of their experience, and which cannot be learned too soon, is to beware of such flower seed as are advertised in the catalogues, on those pink, yellow, and various other colored pages, under the original heading, "Novelties for the Season," and for which such exorbitant prices are charged.

I do not intend implying that novelties are to be avoided as something dangerous; there are annually to be found many novelties that are very desirable additions to our catalogued lists; nor can we do without them, for in the present perfected state of floriculture so many new varieties are produced from seed every season that should one obtain the choicest perfected strain of seed of every variety of annuals, biennials and perennials grown, and purchase no improved varieties or "novelties" for several consecutive seasons after, he would be astonished to find how much mistaken he would be in supposing his collection could admit of no improvement; for, in that period, there would be decided improvements on every variety of his so-considered perfect collection. Nothing can more forcibly demonstrate the truth of this assertion than the wonderful improvement during the past few years in *Asters*, *Petunias*, *Pansies*, *Verbenas*, and nearly every other variety.

Among the novelties of the present season, and one that gives promise of being of great value, both to the professional florist and amateur, even if half what is claimed for it is true, is *Petunia*, *hybrida robusta flore-pleno*, a hybrid variety of robust, compact habit; *Petunia*, *grandiflora fimbriata, flore-pleno*, (large flowered, doubled fringed *Petunia*) is a standard variety of superb beauty and magnificent markings.

Every year brings forth some choice improved variety of *Pansy*. *Prince Bismarck*, *Imperialis*, and *Emperor William*, being notable varieties of recent introduction. No flower introduced during many years has given such universal satisfaction, and deservedly so, as *Phlox Drummondii*, *grandiflora*. The improvement of this variety over the old one is scarcely less than that of the *grandiflora* *Petunias* over *Phœnicia*, the original type; the description of the florists when they say it is, in size and texture of blossoms, scarcely inferior to the perennial sorts, scarcely deviates from the truth, and can hardly be called exaggeration. Nothing is lacking in *Phloxes*, I may safely say, but doubtless, now, and I should be far more pleased than surprised to see it doubled at any time.

The new *carmine* *Candytuft*, introduced some years since, is a desirable novelty of real merit, as are also the many new varieties of *Amaranthus*, *Salicifolius*, (*Fountain plant*), *Henderi*, &c.

No flower is more susceptible of or has undergone such vast improvement as *Reseda Odorata*, (*Mignonette*)—the foliage and habit, however, not the fragrance. As for fragrance,

the old grandiflora variety is as good as Dwarf Compact Pyramidal Boquet, or even that acme of perfection, if the catalogues are to be believed, Miles' Hybrid Spiral. Double Zinnia elegans is a flower of recognized merit in its recent perfected state, though the extensively advertised "novelty" Darwini, admits of no improvement over the Elegans type, and falls far short in its claims to superiority. While all flowers, under the skilled treatment of the florists, show some improvement, both in variety and size of flower, no one could recognize in the present magnificence of our Dianthus, which acknowledges its highest perfection as yet in the superb Double Diadem, the old Pinks of our gardens, or think of looking for the old fashioned garden Hollyhocks in the present perfection of Chater's magnificent sorts.

It would be altogether unnecessary if not impracticable to notice even the most striking and marked improvements that have taken place in our large list of fine flowers, from Abronia to Zinnia, within the past ten years, nor would it be even expected by any, for one to scarcely touch the subject of plant improvement in anything short of a book of two or three hundred pages; but I cannot close without noticing a few of the most remarkable and valuable novelties in this department in recent years. Abutilon, Boule de Nieve, is a standard sort of many sterling merits; as are, also, Cyclamen Magnificum; Fuchsia Mrs. H. Cannell, in which florists recognize a "new departure" in Fuchsias; Ivy Geranium Koenig Albert, to which we are indebted for the first double flowers in this class; Hydrangea, Paniculata grandiflora, a hardy variety, with good claims to "the best;" Tea Roses, Duchess of Edinburg and Marshal Niel, the latter, if not a novelty, the best Tea Rose grown, and Carnation, Peter Henderson. Carnation, Mrs. Henderson, sent out this season for the first time, will be accepted by all as a long recognized want, if what is claimed for it prove true. The new varieties of Coleus sent out by Henry A. Dreer, mark the era of a complete revolution in this unrivalled bedder, and places them pre-eminently at the head of all Coleus.

The subject might be continued indefinitely, naming many other standard novelties, and also some varieties that have been lately sent out with descriptions sufficient to captivate the fancy of any flower lover, but which unfortunately differ so greatly from their descriptions that one fails to recognize them; like, for instance, the annual variety of "the new Striped Tea Rose;" but I forbear, and close by committing the "novelties" to the mercy of the grower, but more especially the growers to the mercy of the "novelties." W. G. IVY.

Warwick Co., Va., Jan. 14, 1881.

FROM MESSRS. ELLWANGER & BARRY, the extensive nurserymen of Rochester, N. Y., we have their Catalogues of Fruit and Ornamental Trees, and their Rose and Strawberry Circulars, all very full and instructive, and containing features which are peculiar to them alone.

Vegetable Garden—March.

Hot-beds will now claim attention. Tomatoes should be sown thickly in a small hot-bed, to be singled out and transplanted into a second one a few weeks later. The same plan may be adopted when early cucumbers are desired, observing to sow the seed in flower-pots plunged to the rim, so that they can be readily transferred to the fruiting bed. I prefer to delay the sowing of egg-plant and peppers until the end of the month or even later.

It is generally best to leave seed-raising to those who make a business of it, but if a few choice seeds are wanted, a small piece of ground should be reserved for that purpose, taking care that only one variety of each vegetable wanted be sown so as to avoid mixing.

March will be a busy month in the garden: see that the crops are put in with some method and foresight. A practice far too common is to begin by dotting the land all over uniformly with small heaps of manure. I notice that a good deal of that has already been done both on farm and garden. Last night we had a heavy rain, and by and by those little heaps will dwindle down to a few straws. But even where the heaps are spread at once, which is rarely the case, the practice is objectionable. Some kinds of garden crops require three or four times the quantity of manure that others do, and it requires some knowledge and judgment to divide a given quantity of manure amongst the various crops according to their needs. Where a great variety of crops is wanted the best way is to work part of the garden precisely as in the best market gardens, manuring heavily and taking two crops from the land of such articles as cannot be had without a plentiful supply of it; and part as a farm garden, using much less manure and raising corn, tomatoes, beans, peas, melons, squashes, parsnips, carrots, gumpo and some other things that may be manured lightly in hill or drill.

Some people are in the habit of giving most manure to their poorest land. This is also a mistake. The best land is the most deserving of manure and should be reserved for such vegetables as require most of it.

As soon as the ground is in a fit condition proceed to sow hardy vegetables. Where the supply of winter spinach is short it would be well to sow that first on very rich soil. Besides sowing and planting the main crop of onions, do not fail to raise, or attempt to raise, a supply of sets for future use. I shall sow mine on a hard, poor spot, and cover with 2 inches of sand; but this, by way of experiment. Celery seed should be sown early and well tramped in, as was well explained by a correspondent last month; and from the trouble I had in weeding my bed last spring, I would advise to drop a few radish or lettuce seed in the drills so that the rows may be traced and the hoeing done before the celery comes up. All broad-casting of seed should be banished not only from the garden, but from the mind.

And, by the way, what are young farmers and gardeners doing these long evenings in the way of improving their minds? Just before I sat down to write, I read a lecture by Prof. James F. W.

Johnston on "The relations of Chemistry to the Soil," &c., and a boy of 15 at my elbow wrote down every word as fast as I cared to read it. He would never have chosen such a dry subject of his own accord, but that he got quite interested in it I could judge from the questions now and then addressed to me. Thirty years ago, finding by experience the great advantage of a knowledge of shorthand in my business, I sent a communication to that effect to the English "Gardeners' Chronicle," but was respectfully informed that "the subject was not suitable for its columns," and that, too, when the veriest trash could have been pointed out in almost any number of the paper.

I have never been able to comprehend why a few words addressed to the young, encouraging them to studies of an intellectual nature, or dissuading them from liquor, tobacco, or other abominations should not be suitable for the columns of the best farming paper in the land. Country boys should study the stars, learn a modern language, and in general, try to be just a little ahead of their city cousins.

Baltimore Co., Md.

JOHN WATSON.

Forcing Early Vegetables.

Messrs. Editors American Farmer:

This month finds the market gardeners of Anne Arundel busy fixing their hot-beds for early vegetables. As it is the early bird which secures the worm, our truckers vie with each other in the effort to be first in market. Owing to competition of late years from the sunny South, the people often get a surfeit of garden stuff before our earliest gets into market, but taking it on the average, those who succeed in getting their produce into market early secure the cream, leaving the skim milk to those who come later. The management of hot-beds demand a great deal of labor, time and attention; constant care and watchfulness being the price of success. Your readers who know nothing of the care of hot-beds need not envy us much, as we are obliged to spend four months of the year among them.

Perhaps a description of our method of forcing early vegetables will be of interest to some of your readers. We usually begin sowing tomatoes and cabbage about the 16th of February, egg plants several weeks later. In making the seed bed dig out a pit three feet deep, as long as needed, and as wide as the length of the sash, fill the bottom of the pit with several inches of leaves or cornstalks (this favors fermentation, and enables the bed to hold its heat longer) fill to within a foot of the top of the frame with unfermented horse manure. The frame should be several inches higher on the north side of the bed than on the south side, in order to get the full benefit of the sun. Upon the manure place about three inches of rich loam. As soon as the fierce heat of the bed passes off, which will usually be in four or five days, sow in drills one inch deep and four inches apart, pressing the earth slightly about the seed with the hand.

After the plants are an inch or more in height give air on warm days; this prevents them from growing weak and spindling; too much cold air,

however, should not be admitted to the young plants, or they will damp off. Cabbages do not need much manure under them; sometimes they do as well in a cold frame as in a hot bed; they germinate at a much lower temperature than egg plants or tomatoes. They should have plenty of air in order to make them tough and stocky; transplant to the open field the last of March, setting the plants down to the first leaf. Tomatoes should be transplanted to a cold frame when about five inches in height, setting them about four inches apart each way. Egg plants require hot manure under the transplanting bed, and should be set five inches apart.

After transplanting, (which should be done on a mild day the last of March or first of April,) shade the glass slightly for several days to protect the plants from the scalding sun. The plants should then be forced until time for removal to the field, the early part of May for tomatoes and the latter part of the month for egg plants. The leaves of growing plants should be frequently pinched back to admit light and air, and to cause side shoots to put out, thus making stronger and earlier plants. Frequent stirring of the soil between the plants, and watering occasionally with liquid manure or guano water greatly helps their growth; they should be well hardened before setting out, and it is useless to set out egg plants until warm weather, for being a tropical plant it is very sensitive to cold. I have known them to stand still for weeks, shed their leaves and many of them perish.

In taking up for setting out in the fields run a manure fork under them and place them dirt and all in the bottom of the cart or wagon, and set in the freshly manured hills; the custom here is to manure and plant the hills the same day, choosing a time after a rain, or making a season during a dry time by pouring water around them after planting; the bed if dry should be thoroughly drenched with water before removing the plants. Some of us have been experimenting of late years with cucumbers and cantaleups under glass with varying success; in my next I will try and give you the results of our experiments.

R. S. COLE.

A. A. Co. Md., Feb. 16, '81.

The Sweet Potato.

Messrs. Editors American Farmer:

We predict for the Sweet Potato much more accurate knowledge of its range and requisites than has yet been obtained. Doubtless a boom in the near future is at hand, whereby the sweet potato will receive the importance its culture so deservedly merits.

It is well known that this esculent is the most eatable and excellent of all tubers—the king of tubers, and that the most tempting, delicious and healthy culinary preparations are easily and cheaply made of these sweet farinaceous roots. They may be cooked and served in so many ways and in such a manner as to tempt the gods, much less common mortals who never were known to refuse them when cooked in any shape.

The sweet potato flourishes in any light, sandy or loamy, warm soils, but it may be cultivated

with advantage in almost any warm, light lands with southern exposure and suitable manures; especially when planted as early as frosts will permit. "Land on which corn will *burn* and *dry up* is just the place for this tuber;" and, if the season after they get a start be ever so dry and hot, they will continue growth as though it were ever so seasonable. *The main point is to keep down the weeds and grass.* If these get a start much labor, especially hand weeding, will be necessary, and they are very impatient of disturbance in the hill or ridge incident to close weeding.

When the vines begin to run and take root in the *balks* they should be loosened from the soil with the hand or a pronged weeder. This is also necessary in cultivation, and the pronged hoe is used to pull them out of the way of the plow. In harvesting a two-horse plow is used to plow them out, the vines being first cut off with a sharp weeding hoe. They are then taken up and the dirt shaken out, sorted and placed in hamper or baskets and stored or marketed.

The special advantage of raising this crop is, that dry, hot seasons, that with us seem to be on the increase, is a *requisite* with the sweet potato, and the *drier* the season the *larger* and the *better* the tubers. The Irish Potato requires conditions just the reverse. A cool northern exposure, with loamy, rather heavy soil and a thick mulch, is required to bring them out right; coolness and moisture are required for them, and land well adapted to the sweet potato would scarcely produce them at all.

Let every farmer in the potato regions have his hot bed ready by the 1st of April, so as to be ready to plant by the 10th or 15th. What better or surer crop can he raise for home use or even for market than the sweet potato?

Kewick, Albemarle Co., Va.

J. FITZ.

Cultivation of Late Cabbage.

Messrs. Editors American Farmer:

The manner of cultivating of Late Cabbage is not quite so expensive as that for early, and as a consequence the receipts for the crop are correspondingly low. In fact, it is often sold at prices that would not more than repay the price of manure and labor expended on the early crop; but it can be raised with much less manure and labor, and on land less valuable. It is very extensively grown in our locality; some planting as many as one hundred and fifty thousand plants in one season. The seed are sown in March, any time after the 17th, when the ground is in proper condition to use a garden rake. After getting the beds in suitable order with plow and smoothing harrow or rake we sow the seed; rake in lightly, so as not to pile the seed, and firm the earth to them by treading or patting with the back of a manure shovel; this is very necessary, particularly if the ground is dry.

If the flea appears we have found one bushel of plaster, saturated with about one gill and a half of gasoline or coal oil, applied lightly when the dew is on to entirely exterminate them.

The preparation of the ground for cabbage differs in nothing from that for all the regular market crops, requiring careful plowing and har-

rowing. They are set out in July on the ground from which early potatoes or peas have been grown. Mark off the rows about three feet apart each way with one-horse plows, apply one shovelfull of well-rotted manure to two hills, or one handfull of some good fertilizer to two hills. Then take an one-horse plow and throw a good furrow on the manure, so as to cover well; with a hoe give a firm pat on each hill, or what I think is better, use a light one-horse roller, and roll two rows at a time. This is very essential, as it gives us a season for planting many times, which we would not have if the ground had been left loose. Do not disturb every alternate middle, this will blot out the cross furrows, and greatly impede the progress in planting. The crop is almost exclusively worked by the cultivator and double shovel plow, one hoeing usually sufficing around the plants. We allude to varieties with some hesitation, as it is generally believed by every seedsman that his variety is the best. My experience has led me to use a Flat Dutch variety, grown by one of my neighbors, Mr. Thomas Pumphrey, when I can get them, it being an early, solid, large header. Landreth & Sons, of Philadelphia, have some very good varieties of Flat Dutch and Drumheads; and the reliable seed houses of Baltimore have the same.

About the second week in October those that have not been marketed, we secure from frost by pulling up all the solid heads, and turning them head down in the middle of the row, four or more rows together, covering the heads by throwing a two-horse furrow on both sides of them, leaving the roots out; we secure the loose ones by bedding root down in a furrow made by a one-horse plow, filling the length of furrow with cabbage; throw on the next furrow, covering the roots well, and so on till the bed is finished. For protection against the severity of the Winter we cover the beds with leaves from the woods about six inches thick when first put on, laying on some fine brush or something else to keep the wind from plowing them off.

A. A. Co. Feb. 24, '81.

A. RIDER.

THE AMERICAN AGRICULTURAL ASSOCIATION.—A meeting of the directors, officers and others, was held February 3d, in New York. The president made an address, and after some routine business was transacted, Committees were appointed for the year. The only name we notice from Maryland is that of Mr. A. M. Fulford, the well-known breeder of Berkshires, Harford Co., who is placed on the Committee on Emigration. Col. Robt. Beverly, Dr. Thomas Pollard and Prof. M. G. Ellzey of Virginia, are named for those on Exhibitions, Botany and Forrestry, and Cattle Diseases, respectively.

MESSRS. THOMAS NORRIS & SONS.—We call special attention to the line of goods offered by this house, which includes the Norris Chilled Plow, which is making a reputation for itself; genuine Malta Double Shovel Plows and Iron Age Cultivators, all the standard plows popular here, the Brown Farm Wagon, Temple's Cucumber Pumps, and a full stock of field and garden seeds. Give them a call.

An Aquarium.

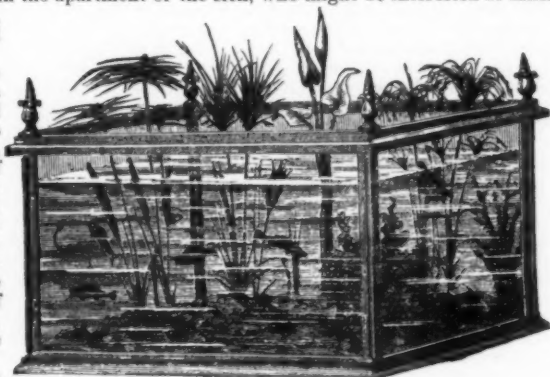
There is no ornament for a country, or indeed any home, more beautiful and interesting, when neatly arranged and well kept, than an aquarium. It is suited for the parlor, library or dining room, and may not be out of place in the apartment of the sick, who might be interested at times in the motions of its inhabitants, when the song of a bird would annoy.

The theory on which aquariums are constructed is that there is a balance between the animal and vegetable life they contain. Plants absorb carbon and give out oxygen, whilst fish and other denizens of the water exhale carbon and inhale oxygen. Plants suited to growth in water will give not only a handsome appearance to such constructions, but they admit of the indefinite prolongation of animal life with very infrequent changes of the water. Care must be taken, however, not to overcrowd the vessel with either plants or fish.

Mr. Bishop, of Baltimore, who is celebrated for his aquariums, says the main secret of success is to introduce plants which liberate oxygen freely, thus purifying the water, and one which he introduces most abundantly, especially for an elevated central plant, is *Cyperus alternifolius*. The next point of importance, he says, in the management of an aquarium, is to give it proper light and temperature. An aquarium to remain a long time in good order without change of water should always stand in front of a window, where it gets a direct light and very little sun. *Conferve*, a green moss-like growth, will in time settle on the sides of any aquarium, no matter where it stands; but in an aquarium exposed to the sun more *conferve* will accumulate in three weeks than would accumulate in three months in an aquarium standing in a shady place. If your aquarium be a large one, say from eight to twelve gallons capacity, you may, after a *conferve* has settled to the glass, take out a few quarts of water, so as to admit your arm, then rub off the sides of the glass with a piece of coarse linen or cotton toweling, and when this is finished refill the aquarium. In a day or two, after the water has settled, your aquarium will look better than at first. The water will then have a part greenish shade and be very clear. A two gallon tank may stand without change of water from four to six weeks; a four gallon tank from eight to ten weeks, and large tanks from three to six months. You must, however, remove the *conferve* from the glass as advised above, and every week or two add as much water as may have evaporated.

The best temperature for aquaria is from 45 to 65 degrees Fahrenheit. Less than 45 degrees will not hurt, but over 65 degrees is not recommended. When a room is artificially heated, a good temperature for aquaria can always be had near a window, as advised above.

FUCHSIAS may be trained into any desired shape. Take little upright plants, pinch out the centre, and in place of one there will spring out two, often three, shoots. Let these make about the same growth, and repeat the process to each.



The Asparagus Beetle.

In our December number we gave an extract from a paper read by Mr. Luggar before the Maryland Academy of Sciences on this insect, with his suggestions for its destruction. We now present, copied from the report of Prof. Comstock, Entomologist of the Department of Agriculture, a cut of the beetle in its perfect and larval states, enlarged about twice its actual size.

The beetles, about a quarter of an inch long, come out from their hiding places early in Spring, and soon lay their eggs on the young plants, they being placed endwise as shown, in rows of from two to seven. They hatch in from seven to ten days, the larvæ resembling very much those of the potato beetle, and about three-tenths of an inch long.

The larva and the perfect insect both feed on asparagus only. The beetle has a head, feelers and legs shining black, with tinges of metallic green, the thorax reddish brown, and the wing covers light lemon-yellow with black stripes and bands, as shown. There are several broods during the season. Air-slacked lime seems to be the most effectual remedy, and is best applied by means of a sifter, and in the morning when the dew is on. The lime has no effect on the beetles but only on the worms. Some authorities recommend that all volunteer growths of asparagus be destroyed, forcing the beetles to lay their eggs on the shoots for market, which are cut frequently enough to prevent them hatching, but this is hardly practicable where it grows so abundantly as along the Chesapeake.



Work for the Month—March.

This is a season when every farmer awake to his duty must not only work, but work with an intelligent skill and well directed energies. Arrangements made, let us hope, upon a judicious and comprehensive system, are now to be carried out with promptness and unremitting diligence.

The Oat Crop should be seeded as soon as practicable after the frost is out of the ground, and it can be put in good order by the plow and harrow, early sown oats always making the best grain. After the seed goes in it is a benefit to pass the roller over the ground. A dressing of 200 lbs. of super-phosphate or fine ground bones will be a great help to this crop, which too frequently gets poor treatment.

Sowing Clover Seed.—For this work there will now be many opportunities, but care should be exercised not to go on the ground when it will poach. A light harrowing and rolling will be an advantage not only in covering the clover seed, but to the wheat or rye crop as well. Seed sown after the frost is out succeeds or not according to the weather, much of it perishing after it sprouts, if it is not covered or pressed into the ground by the harrow or roller.

Barley, like oats, should be sown early. This crop in some sections is replacing oats. It does well only on well drained soils, and prefers a texture rather light than stiff. Careful plowing and pulverization are necessary, and a great advantage to the young plants, after they reach the height of an inch or two. A dressing of a good super-phosphate, or a mixture of Peruvian guano and fine bone-dust is good for this crop, but rough fermenting manure ought to be avoided. From two to three bushels of seed is used to the acre, poor land requiring thinner seeding. Barley and oats sown together make a good feed for cutting green for dairy cows.

Potatoes thrive best in a cool, moist, but not wet soil, in the early season before the time of high temperatures, and in a soil containing considerable vegetable matter. Fresh stable manures predispose to rot and injure the taste of the tubers, but well decomposed composts and such fertilizers as bone, super-phosphate, guano, &c., all act well.

The Corn Crop.—Preparations for this will be in order; and when a sod is to be turned, the contents of the barn-yard and the compost heaps may be hauled out and spread. Corn is a gross feeder and there is little danger of applying too much manure; but it is a good rule to plant no more than you can manure, and cultivate that well.

Tobacco.—Making tobacco beds must now be attended to with all diligence. The ground must not be dug deep enough to throw up the clay; but to dig down to the clay is a necessary point. Clear out all the small roots and stumps; chop and dig until every root is removed and the soil is thoroughly disintegrated, so that if need be it could be passed through a sand screen.

Then apply the dung or fertilizer, then chop in and bed up, and rake off with a fine garden rake.

The seed, kind and quality, is now the important item. Seed that was caught by the frost before ripening should by no means be used. The chances against the planter at best are very great. Therefore all diligence should be used to have on hand the most perfect seed. The kind of tobacco also very materially enhances the prospects of the planter. In our experience the "thick set tobacco" is too rough, stems, stalks and fibers are too large to make a very fine article. The Oronoco and White Burley stand foremost for quality.

It is not too early now for the planter to begin to prepare for that universal pest, the tobacco fly. The use of air slacked lime applied in time, before the fly makes the attack, has never failed in our hands.

Live Stock.—March is considered the hardest month of the year on our farm stock of all kinds, and after a long cold Winter like the past has been, we must all, of course, be exceedingly anxious to get the Spring plowing done as rapidly as possible, so that we must look around with care to see that every horse and mule has a collar and hames of suitable size and in good order, so that no time need be lost from galled shoulders. The cost of a new collar of best quality for a draft horse would be more than made up by two or three days' work that would be sure to be lost from the unnecessary sore shoulder, caused from using the old one; besides, the cruelty to a faithful servant, who cannot speak when he is hurt by our carelessness. Should you be so unfortunate as to have a sore shoulder, it can often be cured without loss of time by cutting out on the *upper side of the collar* enough to pull a considerable amount of stuffing out, and then wet the collar and hammer down on the *under side* to make a hollow over the sore spot. See that the *oxen* are in good order and have well shaped yokes, crooked enough to make the centre of draft come down near the middle of the neck, and also have the bows as short as possible; oxen are much more apt to be hurt from working in bows too long than too small. An old 56 lb. weight to hang on the yoke of all oxen that are worked by a chain will add at least one-third to their usefulness by keeping the yoke in place when they pull.

Steers that have been wintered on dry food alone to this time, will do much better if fed a little corn (or meal would be better,) from this time till they can obtain a full bite of grass. The early market is almost always the best for beef cattle, and good feeding during the last of the winter always pays well.

Brood mares that are worked with care are apt to do quite as well as those who do nothing but eat. In all cases they should have a roomy box stall or small yard to run in when not at work for at least one month, before they are expected to foal. When the foal is four or five days old, the mare can be safely put to work again, if she is well, but should not be kept from the colt more than a few hours till it is at least a month old.

The Orchard and Fruit Garden.

Over the greater portion of territory in which the *American Farmer* circulates, this month usually affords opportunity for the performance of many out-door jobs, of importance in the proper management of orchards; such as pruning, manuring, replanting, etc. The shortening-in of branches and main stems of trees planted during last Fall should not be longer delayed. Apple, pear and cherry trees do not as a general thing require as much cutting off or shortening-in as do peach, plum, apricot, etc.; these make more satisfactory growth the first season after planting, when *all the side branches* and a portion of the main stems are removed; and this work ought to be performed with due care, using a *sharp* knife and cutting so as to leave as small wounds as possible. In many places the severe weather at the close of the old year has wrought great injury to peach orchards, even on such as were protected by the rough and thick bark that had shielded them for from ten to fifteen years previously, discoloring the inner side down to the snow line, the range of which on the trunk varied somewhat according to location and exposure, being in some instances not more than six inches from the ground, and in others as much as twelve inches. When the cold was less severe the young twigs and limbs of feeble growth mark the extent of the injury. So it will be readily understood that the growers of peaches over the greater part of the peach belt of Maryland at least, will find plenty of labor in their orchards this year, with poor prospects of compensation in the way of a crop; the labor thus bestowed will be on the principle of a loan on *indefinite* time.

Above we spoke of manuring, and desire to impress upon the minds of our readers the utter impracticability of raising *good* fruit of any kind without providing the trees with plenty of such nutriment as is actually necessary to healthy, thrifty growth and condition. The neglect to manure liberally is more apparent in our apple orchards than elsewhere; and yet many people cannot understand why the fruit is not as good as when they were boys; yet in most instances where the fruit of the apple orchard has deteriorated, it will be found that there is just cause for the same, because of the appropriation of every shovel full of manure made on the farm, to the corn, potatoes, &c.; and then, too often when there is manure applied to the soil on which the apple orchard is located, a crop of such nature as to exhaust nearly the whole of it, is planted at the same time. It is poor economy in point of both health and money for any farmer to stint and neglect the apple orchard. Plenty of good apples to eat, cook, dry, and make into vinegar, implies almost volumes to the intelligent mistress of the rural kitchen.

In the *Fruit Garden* as well as in orchards the extreme cold has done much injury. The Wilson blackberry plants in many places are frozen down to the snow line, as also most varieties of red raspberries. The Kittatinny blackberry exhibits no visible indications of injury, nor the

Gregg and other black cap raspberries. While the freezing may curtail to some extent the supply of blackberries and raspberries for the family, it is gratifying still to know that some of the hardier kinds can be depended upon for a partial supply. The removal of the injured or frozen wood will be in order as soon as the extent of such injury can be definitely established. Grapevines not yet pruned should have attention the first mild weather, and the vines secured to the trellises by tying with strings of some kind, to prevent buds being knocked off by the wind blowing the vines to and fro against the trellis.

A dressing of good wood ashes, broadcast over the strawberry bed will be of much benefit to the plants, and yield a liberal per cent. on the outlay in the increased quantity and quality of the fruit.

Bee Notes for March.

This is one of the worst months of the year to the bee keepers of this vicinity, and this season it will be unusually bad, owing to the severe winter we have passed through, and the ravages of dysentery. A great many colonies will be found so weak in numbers as to scarcely be worth trying to save, unless they have a young prolific queen, and can be strengthened by giving hatching brood the last of the month from *strong* colonies. I would recommend they be united with others; two or three weak ones united will pay better than attempting to build them up. Look your bees through carefully some pleasant day, removing all filth and dead bees, and learn their exact condition. If nearly out of stores don't delay giving them plenty; there should not be less than 15 lbs. of sealed honey in every colony at this time. If breeding rapidly, more will be necessary. It is best to feed a little *to all* and give them plenty of rye flour, buckwheat, oatmeal or wheat flour, placed on empty combs and put in some sunny place near the hives where it will be protected from the weather and high winds. Keep it where they can help themselves if they need it, although they will get natural pollen when they can fly, but you will be astonished at the amount they will carry away from the combs. Sprinkle salt about, at this season they will take it greedily and reject it later in the season. Don't give too much brood room in the nest, keep it contracted so the combs will be well covered, and keep the mats or honey board, (or whatever top covering you use) close and tight above to prevent the escape of heat. Economize it all in your power, for here is *one* of the *great secrets* of success. A loss of heat at this season is a loss of bees, and consequently a loss of honey. Therefore keep plenty of top covering over the brood nest. More bees dwindle in the Spring from giving too much ventilation than by any other cause. Keep the fly hole contracted to two inches.

Should the weather be favorable, a few queens can be started the last of the month for early swarms, but they should *not* be started unless you are sure drones are being reared. Those who think of transferring from box to movable frame hives cannot select a better time. Get your surplus boxes all ready, and foundation all

in the frames for early swarms. In cleaning up, save all the comb, and just as soon as possible convert it into wax before the moth can get a taste of it. With the many facilities at our command, it can be converted into wax, and again into foundation and returned to the bees in a few hours. Don't destroy the bright comb; put it in the surplus boxes, and it will be time saved to the bees. Save also all the good brood combs, and when the weather gets warm expose them to the fumes of burning sulphur to kill the moth larva; after which they can be kept in a tight box, for future use in the brood frames. L.

The Farmers' Convention of Montgomery County, Md.

An innovation upon the former plan of conducting these meetings was a luncheon after the reports of the clubs had been received. Many baskets of provisions had been brought, and a bevy of the ladies of the vicinity arranged and distributed their contents, and provided an abundant supply of fragrant coffee; the assembled crowd fully enjoying this thoughtfulness, and manifesting their approval by an unanimous rising vote of thanks.

What is the least size of the farm on which it pays the manager better to superintend than to labor; and what constitutes a successful farmer? Wm. Hy. Farquhar said when a man has so much land that he need not labor, he had better give some up to some one else. There is no point which can be fixed when a man ought to stop work.

John Smith said there were different kinds of men, some being able to work and manage both. System gets through much work and concentrates labor. Some men farm four or five hundred acres of land and lead their men. E. Griffith tried to avoid being an expensive farmer. Thinks farmers till too much land. One who works two hands is likely to make more than one working four. Too many laborers eat up the profits. A good rule is to be about all the time, and see the work done properly. Roger Farquhar never objects to work, and takes a hand in all going on. Has tried to perform less actual labor himself, and does not get as much accomplished; believes it is not best to make a drudge of oneself, and agrees with Mr. G. that farms are too large, and profits not as great as on smaller farms, whilst cares and anxieties are greater. Wm. Lee don't know the point aimed for in the question. Works 200 to 225 acres, and it pays him as well as anything in which the same money could be invested, but doesn't think it pays him to work. Rob't Roberts thought it very important for a person managing a farm to understand how work is to be done, that he may instruct his hands, and see they do what they should. Thos. Walters said many other circumstances affect the question than the size of farm. The gist of it is, under what conditions does it pay best to work your row in the field or to supervise. It depends upon the arrangement of

the farm; upon the physical strength of the farmer, for a man who can do only half a man's work had better not attempt to lead his hands, as they lose by lack of example. Z. Magruder doesn't like to labor; it pays best to superintend. Wm. Brown (in his 85th year) knew a man, with sons, who bought 120 acres for about \$5,000 and made more money on it than anyone around, though he never worked himself. Wm. John Thomas commenced on a very poor farm, and had to labor himself, and could not say that he ever made much except by his own labor. Sam'l Hopkins thinks they get along best who work least—*provided they are industrious*. Josiah Jones found work never suited him, and any man with 250 or 300 acres had better superintend than labor. Jas. Cashell thought no farm under that size would pay a man *not* to labor. Wm. Hy. Farquhar regards the question as a moral, as well as an economical one. Where the father shows by example that work is not only honorable, but profitable, the advantage is in the improved tone of the community.

The consideration of the proposed erection in Washington of a farmers' market and hotel resulted in an unanimous vote that such an institution is desirable, and steps were taken to secure subscriptions of funds for its erection.

The ensilage question coming up, Mr. Robert Roberts, of Fairfax Co., Va., showed a specimen of pitted corn, and said he had been keeping a dairy, and for years sowed fodder corn for times of drought and failing pastures, curing what was not used green, but finding some difficulty in doing this, especially in bad weather. Last season he had six acres in rye, sowed in September, and which he pastured in November and in the Spring, and then turned under and sowed in corn fodder. These six acres, and one acre in potato rows, he put in very thick, and the corn grew very rank. Thinking he would have trouble in curing it, his son visited Mr. Charles K. Harrison's place, in Baltimore county, and witnessed the processes of pitting, and imitated it.

Made a trench in a dry place 110 feet long, 6 deep and 8 wide, locating it where there had been an old barn cellar, and lining it with boards; hauled the corn from the field, cut it with a fodder cutter driven by a portable engine, and put it in the pit, tramping a horse over it continually. The time consumed was four days. Put a little straw on it, and covered the whole with about one foot of earth, putting a shed of loose boards over the whole. Cut the corn about the middle of August. It did not shrink or settle apparently. Thinks he had about 70 or 80 tons from the seven acres. The corn was too thick, being in drills about 2½ feet apart. It was cut on the ground with corn knives; the mowing machine, which was tried, did not leave it straight enough. The labor cost about \$1.25 to \$1.50 per ton.

When opened, December 1st, there was no mould at all, except about an inch and a half on top, which was a little decayed. On feeding to the cows some of them did not relish it at first, but soon took to it. Has been feeding fifty cows since December 1st, and not 100 lbs. has been wasted. He feeds about 50 lbs. of the ensilage, a peck of corn meal and bran, in equal parts, and a sprinkle of salt to each cow per day. Gives

also a little dry hay. They eat the ensilage first. Had been feeding turnips before he began on ensilage, and the flow of milk improved on the latter. *q.* Do you recommend for butter as well as milk? *a.* Do not make butter. It does not give any taste to milk.

The trench is opened in the morning and enough taken out to feed that evening and the next morning. A broad-axe is used to cut it down, so compact does the mass become. Would like to have a cutter which would cut the corn very fine.

Are sheep profitable? An unanimous *aye* was the response to this question, precluding debate.

The proposition whether a young man in starting in life had better go in debt for land at \$20, or for more highly improved land at \$60 per acre, the buildings being equally good, was not generally discussed, but essays were read on either side by Charles F. Kirk and Dr. Frank Thomas. We may present their views to our readers hereafter.

After some other matters of local interest were disposed of the convention adjourned, evidently pleased with the enjoyable and profitable day.

Maryland County Societies.

MONTGOMERY.—The following officers have been elected for the year: President, W. S. Brooke; Vice-Presidents, J. C. Holland, Col. Jas. A. Boyd, Benjamin C. Gott, Dr. E. E. Stonestreet, Jno. Brady, Wm. C. Hazel; Executive Committee, Dr. F. Thomas, Geo. R. Rice, Jos. T. Bailey, Jno. H. Gassaway, Jno. E. Willson; Treasurer, W. V. Bouie, Jr.; Secretary, Chas. W. Prettyman.

The Society, owing to unfavorable weather during the last two fairs, is somewhat in debt, but steps are in progress to relieve it.

CECIL.—The officers elected for 1881 are as follows: President, A. R. Magraw; Vice-President, Thomas Drennan; Secretary, John Partidge; Treasurer, W. T. Warburton, Jr.; Managers, A. R. Magraw, Thomas Drennan, C. M. Ellis, W. J. Jones, A. W. Mitchell, Geo. Ricketts, W. M. Knight, I. D. Davis, G. W. Cruikshank, Frederick Stump, J. A. Mearns, and William Armstrong. The Society still owes \$2,500 on account of improvement of its grounds, but its first fair was a financial success, and its prospects are flattering. Fair for '81, Oct. 11—14.

HARFORD.—Officers for 1881 have been elected as follows: President, Garrett Amos; Vice-President, C. C. Kinsey; General Secretary, J. M. Streett; Treasurer, H. W. Archer, Jr.; Corresponding Secretary, Herman Stump, Jr. The date of the annual fair was fixed for October 11—14. The Society is in a prosperous condition financially.

FREDERICK.—The following are the officers for this year: President, Dr. Fairfax Schley; Vice-President, Eugene L. Derr; Treasurer, Col. Calvin Page; Secretary, Fred. A. Markey; Cor. Secretary, J. Wm. Baughman; Chief Marshal, Jno. T. Best. The same date as Harford has been selected for the fair of 1881—October 11—14. Notwithstanding the rains which prevailed dur-

ing its last fair the Society has a considerable balance of cash on hand.

BALTIMORE.—The following have been elected as officers for the present year: President, Samuel Brady; Secretary and Treasurer, Wm. B. Sands; Board of Managers, Dickinson Gorsuch, Samuel Brady, Charles W. Semmes, Saml. M. Rankin, John Ridgely, of H., Daniel Jenifer, Wm. D. Brackenridge, Saml. M. Shoemaker, John Crowther, Jr., Thos. B. Todd, James Pentland, Jacob M. Pearce. The date of the fair for 1881 has been fixed for September 6, 7, 8 and 9.

WASHINGTON.—Officers for 1881 are as follows: President, C. W. Huimrichouse; Vice-President, William Updegraff; Treasurer, Benj. F. Fiery; Corresponding Secretary, Albert Small; Recording Secretary, P. A. Witmer. Directors: B. A. Garlinger, Geo. W. Harris, N. A. McComas, P. B. Small, Benj. P. Rench, Elias Emmert, Dr. John T. Grimes, Chas. F. Manning, A. C. Huffer, Geo. M. Stonebraker. The annual fair will be held October 11, 12, 13, 14, 1881.

CARROLL.—The officers are as follows for 1881: President, Col. Wm. A. McKellip; Vice-President, David Fouble; Secretary, Francis H. Orendorff; Treasurer, Richard Manning. Directors: Edward Lynch, Wm. J. Morelock, John B. Boyle, Jeremiah Rinehart, Dr. Jacob Rinehart. The date of the annual fair is not yet fixed.

ST. MICHAELS.—This Association, which does not hold fairs, but has more the character of a farmers' club has elected as officers for 1881, President, C. W. Haddaway; Secretary, O. Hammond; Treasurer, J. E. McDaniel.

Maryland Granges.

List of Officers Reported for 1881.

MONTGOMERY, POMONA, No. 7.—The regular quarterly meeting was held at Brighton, Jan. 27, a large number of patrons being present. Officers were elected for the term of two years as follows: M., Isaac Young; O., B. F. White; L., Wm. H. Farquhar; S., George Rice; A. S., John W. Horner; C., Jackson Day; T., John T. De Sellem; Sec., E. M. Lansdale; G. K., Robert Briggs; C., Mrs. Jos. T. Moore; P., Mrs. John McDonald; F., Mrs. W. L. Day; L. A. S., Miss Lou Tschiffely.

Methods of protecting our sheep interests were discussed, and a committee was appointed to consider the matter and bring a definite plan before the next meeting. The Committee of Agriculture offered, through Mr. Wm. H. Farquhar, to have analysis made of any samples of lime rock that might be sent him by patrons in Montgomery Co., free of cost. W. Master Young was requested to prepare a paper on a better system of common schools in this county for consideration at next meeting. L.

QUEEN ANNE'S, POMONA, No. 4.—M., Wm. F. Bailey; Ov., C. H. R. Merrick; Lec., John Dodd; St., Finly Roberts; Asst. St., Joseph E. Cooper; Ch., Nathan Green; Tr., Mordecai Price; Sec., Wrightson Lowe; C., Mrs. John Dodd; P., Miss Nannie Tilghman; F., Mrs. W. T. Higgins; L. A. St., Miss Morgan.

ASBESTOS, 172, BALTIMORE Co.—M., S. C. Heird; O., G. W. Longley; L., Chas. R. Foreman; St., J. E. Zimmerman; As. St., Wm. Up-ton; Ch., Jas. Emmart; T., Luther Timanus; Sec., Harry Arthur; G. K., John Kalb; C., Mrs. K. L. Heird; P., Miss Ida Crosby; F. Miss Anna Emmart; L. A. St., Miss Angie Emmart.

GUNPOWDER, 127, BALTIMORE Co.—M., R. Vincent, Jr.; O., J. W. Jacobs; L., Dr. W. T. Allender; Ch., W. H. Merritt; Sec., Walter Gambrill; T., Frederick Gambrill; St., James Woods; As. St., D. A. Kenny; G. K., George Rader.

GLENCOE, 160, BALTIMORE Co.—M., Dickinson Gorsuch; O., Henry N. Merryman; St., Daniel A. Conn; As. St., J. P. Matthews; L., Wm. B. Sands; Ch., Nelson R. Miles; T., Miss Emma Stewart; Sec., W. W. C. Stewart; G. K., Chas. Canoles, Sr.; C., Mrs. D. Gorsuch; P., Mrs. T. Gorsuch; F., Mrs. H. N. Merryman; L. A. S., Mrs. S. Sparks.

CENTENNIAL, 161, BALTIMORE Co.—M., G. H. Merryman; O., S. M. Anderson; L., F. Von Kapff; St., John Peirsol; As. St., Edward Rider; Ch., Rev. Joshua Cain; T., Mrs. Danl. Jenifer; Sec., W. J. Shanklin; G. K., W. Bosley; C., Mrs. W. Stevenson; P., Mrs. Ed. Jessop; F., Miss Rachel Rider; L. A. S., Miss Sophy Talbott.

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BROAD CREEK, 162, HARFORD Co.—M., W. Scott Whiteford; O., Nathan P. Harry; L., H. F. Whiteford; Ch., Geo. A. Davis; T., D. Harry; St., D. A. Bay; As. St., H. H. Heaps; Sec., C. F. Harry; G. K., Hugh Bay; C., Miss Laura Bay; P., Miss Annie Wallace; F., Miss Jennie Heaps; L. A. S., Miss Emma C. Kinsey.

GREAT FALLS, 51, MONTGOMERY Co.—M., R. G. Connell; O., John Saunders; L., William Reading; St., H. A. Garrett; As. St., Nathan Saunders; T., Mrs. Moore; Sec., J. D. W. Moore; Ch., Montgomery Clagett; G. K., O. S. Maus; C., Mrs. Mary McDonald; P., Miss Reading; F., Miss Phoebe Welsh; L. A. S., Miss Nannie Stone.

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WYE, 99, QUEEN ANNE'S Co.—M., John Dodd; O., F. A. Bartlett; L., R. B. Carmichael, Jr.; St., John B. Hammond; As. St., W. T. Higgins; Ch., J. K. Skinner; T., James H. Dodd; Sec., E. B. Vandyke; G. K., Thomas P. Vansant; C., Mrs. John Dodd; P., Mrs. J. K. Skinner; F., Mrs. E. B. Vandyke; L. A. S., Mrs. W. T. Higgins.

LEWISTOWN, 134, FREDERICK Co.—M., Geo. W. Miller; O., Jacob H. Hines; L., Noah Flickenger; St., Cornelius Derr; As. St., Levi C.

Leatherman; Ch., Daniel Gough; T., John T. Geesey; Sec., Jonathan D. English; G. K., Frederick A. Stull; C., Mrs. Caroline Miller; P., Mrs. Lizzie Leatherman; F., Mrs. Kate Zimmerman; L. A. S., Mrs. Eliza Michael.

We installed our officers on Saturday last, and had a pleasant time. Bro. Saml. Dutton, Worthy Master of Eastern Star Grange, Frederick City, assisted by Bro. Marion Getzendanner of the same Grange officially. The services were conducted admirably. Prof. W. A. Waltman led the singing in a masterly manner. Miss Ida C. Miller, presiding at the organ, rendered most skilfully the very appropriate Grange music for the occasion. The whole affair was a success, and betokens for Lewistown Grange a forward movement.

RESOLUTE, 26, PRINCE GEORGE'S Co.—M., Calvin Van Deusen; O., Wm. Snowden; L., Mrs. Geo. H. Nye; St., P. C. Gorman; Sec., Mrs. H. Steiger; G. K., S. Fletcher; Ch., Rev. J. Nicols; P., Mrs. A. W. Snowden; C., Mrs. Fletcher; F., Miss Steiger.

LIMESTONE VALLEY, 70, HOWARD Co.—M., Ferdinand C. Pue; O., John S. Watkins; L., Andrew Adams; St., William Clark; As. St., James T. Clark; Ch., Lloyd W. Linthicum; T., Miss Helen Harban; Sec., James Harban; G. K., J. N. Miller; C., Mrs. W. H. Hardy; P., Mrs. H. T. Ridgely; F., Miss Blanch Watkins; L. A. S., Mrs. J. Harban.

SPRINGVILLE, 158, CARROLL Co.—M., Eph. Shearer; O., J. W. Hoffman; L., John L. Hinkle; St., E. W. Hains; As. St., E. Peterman; Ch., Jacob F. Shearer; T., J. R. Miller; Sec., J. D. Shearer; G. K., John Pesh; C., Mrs. Saml. Hofacker; P., Mrs. Eph. Shearer; F., Mrs. J. A. Bahn; L. A. S., Miss Lydia Shearer.

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SUMMIT, 164, BALTIMORE Co.—M., Vincent McCullough; O., Thomas N. Bull; L., M. Alban; St., Jacob B. Hampshire; As. St., Philip S. Cross; Ch., John E. Bull; T., Wm. McCullough; Sec., Jacob N. Shauck; G. K., Jesse Hoshall; C., Susan McCullough; P., Maria Shauck; F., Mary Bull; L. A. S., Sarena McCullough.

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PATAPSCO, 125, BALTIMORE Co.—M., A. J. Rogers; O., G. Stengel; L., Thos. B. Todd; St., Robert T. Todd; As. St., Frederick Krauk; Ch. Benjamin F. Bond; Tr., Wm. Lynch; Sec., T. Alvah Merritt; G. K., J. M. Bowen; C., Sister A. J. Rogers; P., Sister Ella Boone; F., Sister Laura R. E. Phelps; A. L. S., Sister Ella R. Jones.

BALTIMORE COUNTY GRANGE, No. 13, will hold its regular quarterly meeting on Tuesday, March 8, at 10.30 A. M., at Temperance Temple, Baltimore.

Home Department.

Home Studies.

Having read in the November number of the "*American Farmer*" an article titled "Home Studies," it has occurred to me that the writer may not be aware of the existence of a society, which I think will fully meet the want she complains of. A few years ago, Miss Ticknor of Boston, wishing to do good to persons not having access to books, and needing advice as to a course of reading, invited ladies in any part of the United States to apply to her for direction as to the best way to make their reading profitable; she prepared a circular, with different courses of studies marked out, and calling to their aid other cultivated women, commenced the work which has been eminently successful. The rules of the society require every member to promise to read a given length of time each day, and to make notes from memory of what they read, these notes to be sent to her correspondent once a month, that she may judge of her pupils' intelligent understanding of her reading, and what book to advise her to take next in order.

If the student can obtain the books near at hand, she is advised to do so; if not, they will be sent by mail at the cost of one cent per day, and transportation returning.

The programme now before me gives courses of study in History, Natural Science, (under which is included Botany and Zoology,) Physical Geography, Geology and Mineralogy, Mathematics, Astronomy, and Art, which is very full. In some instances ladies have received so much instruction in this department, as to enable them to prosecute their studies without the aid of a teacher.

German, French and Literature cover a very large field, and opens to the earnest reader a mine of untold pleasure and instruction. Ladies wishing to join the Society must make their application to Miss A. E. Ticknor, 9 Park St., Boston. (From June 6th to October 1st., address Newport, R. I.)

I give the rules for entering:

1st—Ladies joining the Society as student members must be at least 17 years old.

2d—Each member will pay \$2 a year, at the beginning of each term; (or, if entering late, for the remainder of the term,) to meet expenses of printing, postage, etc. No fees returned.

3d—Members will be expected to devote a certain amount of time each day, or each week, to their work as members.

4th—The term for correspondence will be, from October 1st to June 1st. Past students re-joining, will be expected to apply before January 1st, that is before the fourth month of the term. The term will be closed in June, by a meeting in Boston, to which all the students will be invited.

5th—A lady wishing to join the Society, as a student, can procure a programme of studies from the Secretary. When she has selected the branch or branches she wishes to pursue, she will inform the Secretary of her choice, and will receive in return the special directions prepared for the course she has selected. She will at the same time, be informed to whom she is expected to report her progress monthly.

6th—Pains will be taken to recommend works that can be easily obtained, as students will usually procure them for themselves. Book Clubs and Public Libraries will make the more expensive volumes, accessible and some will be loaned by the Society with a trifling charge. Advice about the purchase of books on the list will be given when asked, if the books are to be bought in Boston or New York."

There has been lately established a similar Society for young men. S. E. S.

Anne Arundel Co., Md.

The Boy of To-day.

Messrs. Editors *American Farmer*:

Believing there can be no subject more potent to the interests of home and country, than the education of the boys—I submit the following extract from an address on "The Boys of To-day," by Mrs. Livermore, published in the *Exchange*; if happily you may have room for it in your "Home Department."

The lecture in the Bible Union Course in Tremont Temple, Wednesday, was by Mary A. Livermore, upon the "Boy of To-day," delivered here for the first time. Mrs. Livermore began by saying that the boy of to-day would have a greater weight of responsibility upon him as a citizen when he came into manhood than his father had ever known. Grave questions, unknown to the generations past, and unprepared for in the framing of our governmental laws, were constantly arising, and it was this boy who would have to settle them. He must be prepared by training and influence to meet them as they should be met, and to decide wisely upon them. In the first place his health must be considered, and he must be brought into a perfect physical development. Physical training should be made compulsory in schools; there should be a law forbidding boys to use tobacco in any form, or alcoholic stimulants. Reliable medical authorities say that excessive use of these two articles is the cause of the prevalence of insanity and nervous diseases. They should be trained in personal purity, taught that they should live lives of moral correctness, for that though God may forgive sins of license and dissipation, nature never will. They should be taught respect to women, courtesy, the laws of etiquette, and they should be taught that these laws are binding; they should be trained in habits of truthful-

ness, honesty and moral uprightness. The love of country should be instilled into their minds, and lessons of patriotism should be those the earliest learned; they should be given a fine sense of justice, a keen, unswerving loyalty. In short they should be trained in manliness, and more than that, into gentlemanliness.

The boy, rough, unformed, aggressive, as he is, has the most infinite possibilities, and these should be trained at home by father and mother alike, the one giving the head, the other the heart, and in this way awakening all the sensibilities and making a well developed character.

T.

Suggestions for Improvement in Plans of House given in February Number.

I rarely see a plan of a house without discovering some defect in it. I dare say this is partly owing to the fact of the plans being made by men, and few men can so far put themselves into the place of a housekeeper as to be clear upon all minor points of convenience. Comparatively few men, or women either, who have not made a study of it, can form any correct idea as to what the house on paper will actually be when it has assumed a habitable shape, hence the manifold mistakes and disappointments. I have a weakness for entering imaginarily into every house, the plan of which strikes my fancy; furnishing it, and going through the form of housekeeping therein, until I find out every good and bad feature belonging to it. I have taken this liberty with the plan given in the February number of *The American Farmer*, the more readily and cheerfully because it is one of my old favorite, Mr. Downing's, and of a style that always strikes me pleasantly, either on paper or on *terra firma*; but even in the plan of this distinguished architect I find room for improvement to adapt it to the every-day wants of the family who would be likely to live in a house of that character. At the entrance we find a place marked "porch," which I think would look quite as well on the outside, and add greatly to the inside effect, if a window was substituted, and the door at C allowed to do double duty. If the house faced south, as this is supposed to do, what an admirable place this would be for a flower stand, or for a permanently trained ivy, throwing abundant and pleasant light into the hall, and on the stairs. If the door at the other C dividing the front from back hall is glass, as it should be, the advantage of the window will be felt there also.

The next point where I find myself disagreeing with the architect, is in opening a door between the bed room and kitchen; the objections to this seem too obvious to need discussion. It is neither nice or healthful. Again, both pantry and store room are made to open in the kitchen, which was doubtless convenient according to the customs of the part of the country with which Mr. D. was most familiar, but for Maryland ways it would never answer. Very few of our people who live in houses of this kind do all their own work. If they do not keep a servant constantly, they are sure to have them in occasionally; therefore, and also because of the housekeeper being

likely to pass more of her time in the dining room than in the kitchen, I would have the store room door open into the dining room, with another opening into the back entry, for bringing in groceries in bulk, and to be kept bolted at other times. There should be a sliding window through which to pass things from it to the kitchen, and also a sliding window between the pantry and dining room. As we have closed the door between the bed room and kitchen, we will have to sacrifice the closets of the hall and bed room in order to obtain a place for a door there. Closets could be introduced on the west side of the bed room as they are in the dining room, and with very happy effect, allowing one of them to open in the children's room. This it seems to me would admit of a back stairs in the corner of the kitchen where the bed room door was.

There is provision for 11 ft. story; this I think out of character with the house, and otherwise an unwise use of the space; 10 ft. is ample, in better proportion to size of rooms, allowing them to be more easily warmed, and the extra foot is much more desirable up stairs, where it leaves more head room under the eaves of the house. With these alterations, and a few feet of elevation for the ground, this house is well adapted to the use of a country parson, or any other family of refined taste and moderate means. One word more about these plans of houses, which we are all glad to see. Do they not justly belong to the "Home Department?" It will be seen I am jealous for its honors.

Another thought, which I owe to my husband, is worthy of the consideration of every one who builds a new house. It is to square it *between* the cardinal points, instead of *with* them, as is customary; this allows the sun to shine upon every side all the year round—a great advantage for health, and the growth of grass, etc.

CERES.

Decorative Art for Country Homes.

The decorative art mania has overspread the country to such an extent that it seems almost useless to mention the subject in the *American Farmer*, except for the simple reason that so many farmers' wives and daughters are under the impression that it is only the city folks and the wealthy who can afford to be interested in such work. This is a very mistaken idea, one that we should get rid of as soon as possible; for *attractiveness* is a very large item in that love of home that we are so anxious to instill into the family circle.

Decorative art, in its legitimate sense, means to ornament a plain but useful article, making it pretty without losing its usefulness. Of course we may regulate the usefulness to suit ourselves. Surely this is applicable to the farm house as well as to the city residence.

What we absolutely need are ideas and suggestions for simple and inexpensive decorations, in keeping with our means and surroundings. Every room in the house has some homely object that can be made attractive. The mantle-piece for instance—there are few rooms without one, and as a general thing it is as stiff and ugly as possible. A little drapery about it bright-

ens up the whole room. The simple and usual style is a pine board, the length and width of the mantle, covered with any pretty bright furniture covering, with a deep ruffle of the same to fall over the edge and corners. A more elegant drapery, one just as economical, is a piece of ordinary kitchen crash. Cut it one yard longer than the mantle, without cutting off any of the width of the material. Ten inches from each end embroider a band across. Any pretty pattern done in outline embroidery with crewels is effective—fringe out six inches of each end. Get the exact middle and place in the centre of the mantle, securing the back edge of the crash along the wall with small tacks if possible. Half way between the centre and corners of the mantle, loop back the crash with some fancy ribbon, (just as you would loop back a curtain,) tacking the ends of the ribbon against the wall. Taste must be used in arranging the ends to fall as gracefully as possible over the corners. Certainly this is simple enough to be within reach of all.

Outline embroidery—the old fashioned stem stitch—is very pretty, and done so quickly that there are very few farmers' daughters who have not the time to make many beautiful things for their homes. They should be encouraged in any efforts they make in this line, as it has great influence in cultivating a taste for refinement, which is the chief charm of woman. H. C.

Home Interests.

WE HAVE thought since the announcement of the introduction of a column for "Queries and Answers" in the Home Department, that it might be as well that ladies who wish to avail themselves of its privileges should know that their communications will be forwarded, if desired, directly to the Editress of this Department. Correspondents will please therefore address letters of this class to "Ceres," in the care of the Editors of *The Farmer*.

Questions and Answers.

Will you please find out for me whether kalsomine is preferable to lime for washing a white wall, and oblige A BEGINNER, in a new house.

Ans.—Supposing your walls to be prepared for either whitewash or kalsomine, that is, not hard finished, I would advise whitewash, although kalsomine, if well done, lasts longer and looks smoother; but when it needs to be repeated you may possibly succeed in making it answer the first time by following directions closely, but the time soon comes when it will peel off in spite of all you can do, the fresh application dissolving the glue in the first coats. You have then no alternative but to have every inch of the wall scraped, and no one who does not make it a business would ever undertake it a second time, and one who does make it a business will charge you more than a kalsomined wall is worth. Therefore if it is, as I presume, a ceiling or ceilings you are undecided about, and you want them white, use lime. If the side wall, of course you would want color; in that

case kalsomine or paint is necessary. Tints are used now almost entirely on ceilings, and if delicate and undecided in color, are much prettier than white, and kalsomine in these lasts many years without renewing, when there is neither smoke nor dampness.

I gladly avail myself of your indulgence to ask whether there is any way to make my floor look fit to leave it without carpet or matting, and substitute rugs? The boards are not of uniform width, and the cracks between defy treatment of any kind. Yet I do not like carpets in hot weather, and matting proves only a vexation of spirit. NELLY T.

Ans.—I have seen floors of that description made pretty and more comfortable for cold weather, when the carpet was again used, by covering it with a home-made oil cloth, or rather a sham oil cloth, made in the following manner: Paste over the cracks, or, if you choose, over the entire floor, muslin to prevent the effect of swelling and shrinkage of the boards; over this paste again one or more layers of common paper *smoothly*. When this is done and dry, take common wall paper, of pattern and color to suit your fancy, remembering that it will be several shades darker when finished. Paste this upon the floor with as much care as if you were putting it on the wall; when done and dry brush over it a coat of sizing, made by dissolving half a pound of glue in warm water, and when that is dry a coat of common varnish. If the varnish is applied occasionally as you see it wearing off, especially on the track of a thoroughfare, this will last as long as you please. The effect is that of oil cloth, and will look well in almost any room, with pretty rugs about.

I would like to know whether there is any sure way to wash flannel without shrinking.

A YOUNG MOTHER.

Ans.—The only infallible method I have ever known is to wash *always* in cold water, as cold as the hands will bear without making the washer sick. I emphasize always because one deviation will counteract all previous or subsequent care in this respect. By this process you can soak them for an hour or two, if they require it, and you can also spread them on the grass or snow to bleach without injury. You use two or three successions of suds as you would if warming the water, and hang out from the last, which should have very little soap in it. For very fine flannel there is nothing equal to white castile soap.

Embroidery Patterns.

A very easy method of copying embroidery patterns, for those who live a distance from the city, is with blue transfer paper. With a lead pencil trace off the pattern on tissue or any transparent paper, lay the blue transfer paper over the material to be stamped and the copy on top of the blue. Be careful to have your copy on straight, and secure it well with pins to keep from moving. Then go over the lead pencil lines very carefully and exactly with the head of a coarse needle. You will find the pattern nicely printed on removing the papers. Bear firmly on the needle as you trace the lines. H. C.

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*. Subscribers who have minerals, ores, marls, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage or postage prepaid*. Questions as to application of chemical science to the practical arts will also be answered.

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BALTIMORE, MARCH 1, 1881.

Deer Creek Club's Sale.

Reference was made in our last to the practical and useful movement of this club for a general sale, under its supervision, of farm stock and supplies; and in this issue will be found an advertisement of the sale, which will be held at Belair on the 30th instant. The event will doubtless draw a large attendance, the offerings being numerous and varied, and contributions are invited from all who have articles or animals they wish to dispose of.

ATTENTION is directed to the advertisement of Mr. J. Edwin Griffith, who, making a specialty of Light Brahma fowls, has paid great attention to them.

Clubs and Renewals.

We tender to our friends and subscribers our hearty thanks for their kind efforts on our behalf and their prompt remittances since the beginning of the present volume. Notwithstanding the unprecedented severity and continuance of the cold weather, which so largely prevented attention to any but the most pressing concerns, we find by the comparison of February with the same month of '80, that our books show a decided increase of receipts, and a very gratifying evidence of the continued favors of our friends in the formation and renewal of clubs, many of which contain a larger than usual proportion of new subscribers. Will not those who have not yet done so oblige us by remembering our interests at the earliest possible moment? The present month is a very favorable season for adding to our lists, and we hope for general and prompt action along the whole line.

Mr. Walters' Percherons.

Mr. William T. Walters is in receipt of a cable dispatch to the effect that the Percheron horses bought for him were to be shipped February 27th by the steamer Greece from London.

The following letter from Mr. Harry Walters, written with no expectation of publication, will be found interesting, and all the more that it contains some frank utterances as to the impressions made by the first sight of the animals secured, besides some account of the system which under the French government is adopted for the improvement of the horses of the country, and other details worthy of notice.

PARIS, February 10, 1881.

* * * The change in date of sailing of the *France* involved making entirely new arrangements for transporting the horses from the continent. They now will come *via* Paris to Boulogne, the boat for London leaving there on Wednesday night. * * This change involved my staying over Saturday in London.

We reached Seés at 2 o'clock last Monday morning and found Simon all expectation and anxiety. He is a very different man from what I expected. He is highly educated, having graduated first in one of the Lycées of Paris. I was very sorry to do so, but we had to stay with him at his house, and certainly he and all his family (wife, and daughter sixteen years old) were very kind.

We drove over a hundred miles around through the country visiting the principal breeders. Seés is in the heart of the grazing district of France, where are found the breeding stallions and mares of this noble race. You find here however no colts of any age, as they are all sold by eighteen months old to the farmers living in the plains below, about Caen, for agricultural purposes,

where they grow and develop and bring rich returns to their owners.

Until now I had not understood Simon's relation to the Government. We visited the great stud stables of Pin, where the Government have over one hundred and fifty stallions wintering, which, so soon as the standing seasons open they forward in lots of four or five to different stations throughout France, selecting for each such horses as will do most good, and thus securing always new blood. This is not done to discourage individuals from keeping stallions, but on the contrary every thing is done to induce this. Thus, if a person has a very fine stallion which brings good colts the Government awards the horse an annuity. And at present 200,000 francs are paid out in this way. One of our stallions received \$200 (1,000 francs) per annum.

Simon's establishment at Seés is a branch of the one at Pin and next to it in importance. I regret to say that the present government of France are so short sighted as to give all their attention to blooded horses and half breeds, or "coachers," as they call them, and among all their stallions have not a single Percheron. Simon is furious about it but can do nothing. I am also sorry to say that certain American importers have been the cause of a very sad introduction now taking place, aided, alas! by the short sighted policy of the Government. I mean on account of their universal cry for size and weight, these breeders have gone to northern countries and are now crossing on the native Percherons the miserable heavy horses of Boulogne. We saw several of these bought by the farmers at high prices simply to fill this demand. These northern horses have miserable legs, but little style, and will in a very few years, unless the Government takes some action, destroy the magnificent race of Percherons, and which, as Simon said, would soon exist only in America.

At every farm we visited Simon made an appeal and spoke often in most violent terms to these breeders who, as he put it, were destroying the wealth of the country, and he would then turn and appeal to us exclaiming, "All the Americans are not so foolish, here are gentlemen who want pure blood and who understand the difference between Percherons and Boulonnais."

With reference to our horses: they are a splendid lot, and this we better appreciate by seeing how difficult it has been to collect them. Of course in so large a number one is sure to find some better than others, and also some few faults. Thus there is one mare and one stallion seven years old, which of course is not so well, and the mare is with foal, but I think she is the finest animal I have ever seen. She shows her Arab blood to perfection, and I hope we may have no mishap with her. She will foal in April. The stallion alluded to above is superb, and is the only one who has covered any mares of the seven. Every stallion (seven) and every mare (thirteen) of the lot has been working hard, and of course will be much improved by proper grooming and feeding. These horses in France are not spared at their labor, and never fail to answer when called upon to work. There is only one black stallion—a splendid horse, un-

fortunately for America with three white feet. Another one, perhaps taller even than Victor, will weigh I think 1,650 pounds or more. He is a darkish steel grey and a superb horse. The lightest horse in weight, about 1,450 pounds, had a pure Arab grand father and is a beautiful animal. I am sorry to say that Simon was under the impression that the horses were kept blanketed across the ocean, and has had all the mares standing in his stable in this way. As they were not used to it, three of them have coughs, but not bad ones, and I hope they will pass off. The largest of the mares looks more like a stallion, and is, I presume, heavier than any we have ever had. To Stricker and myself she seems very fine, but Simon does not like her as well as some of the others. My favorite is of course the one in foal. Two of them I think will hardly weigh over 1,400 pounds each.

I am perfectly well satisfied that we have done well to make this importation just at this time, and that in future it will be very difficult to duplicate such an invoice. Indeed, like our collection of porcelain, the objects do not exist. And every day it becomes so much more difficult to find anything in Perche which has not been tainted with foreign blood.

We take the National line steamer Greece on 27th.

By an oversight, the advertisement of Cotton Seed Meal of Messrs. A. L. Hogg, Jr., & Co., was omitted from our issues for the past two months. It will be found in its proper place now, and those who are desirous of obtaining a supply are referred to it.

THE CHEMICAL FERTILIZER EXCHANGE of Baltimore city has been organized by the election of the following officers: President, R. W. L. Rasin; Vice-President, W. Morris Orem; Treasurer, Wm. S. Powell; Secretary, A. de Ghequier. Mr. Rasin made an address in which he referred to the importance of the fertilizing business and its connection with the country's prosperity. Twenty fertilizing firms in Baltimore have joined the exchange, the object of which is to develop and improve their business interests, and seek to free them from any discrimination on the part of steamboats or railroads or burdensome legislation in certain States, such as the imposition of heavy taxes on fertilizers, so that the interest of the manufacturer and the planter can be equally protected. It is said to be probable that similar societies will be organized in New York and Charleston.

THE MONTHLY EXHIBITIONS of the Maryland Horticultural Society will begin March 9th, at the Academy of Music. Those following taking place on the first Wednesdays in April, May and June. Invitations have been given to several gentlemen to deliver at the meetings of the Society lectures on botany and other subjects.

Baltimore Markets—March 1.

Breadstuffs.—*Flour.* Active and firm. We quote: Howard Street Super \$3.25@3.75; do do Extra \$4.00@4.75; do do Family 5.00@6.00; Western Super 3.25@3.75; do do Extra 4.00@4.75; do do Family 5.00@6.00; City Mills Super 3.25@3.50; do do Low and Medium Extra 4.00@4.75; do do Rio brands Extra 6.00@6.25; Spring Wheat Family 5.00@5.75; Fancy brands 7.00; Fine 2.50@3.00; Rye Flour 5.25@5.50.

Wheat.—Southern, quiet but steady; Western, firm. We quote Southern Fultz 1.14 @ 1.17; Long-berry 1.20 @ 1.23; Western, steamer red 1.10; Mixed 1.15½; No. 2 red 1.16½@1.17, for spot; March delivery 1.17; April delivery 1.18; May 1.18½; June 1.18½.

Corn.—Southern White firm and in liberal supply; with sales of prime dry to grade No. 1, at 54 cts.; Western, firm, with quotations: steamer 52 cts.; mixed 50 cts.

Oats.—Firm. We quote Western mixed 41@42 cts.; do bright 43@44 cts.; white 43@45 cts.

Rye.—Quiet but firm, with quotations for prime at 1.05.

Cotton.—Firm, with quotations for spots, as follows: Middling 11½@11½ cts.; Low Middling 10½ @ 11 cts.; Strict Good Ordinary 10½@11½ cts.; Good Ordinary 10@10½ cts.

Hay and Straw.—With free supplies the market for Hay is weak in tone, but Straw is steady. We quote as follows: Choice Cecil County Timothy, new, \$20@21; fair to prime Md. and Pa. Timothy \$18@18.50; Western Hay \$15@20.50; Clover do \$16@17. Loose Hay ranges in price from about \$15 to \$23 per ton. Straw—Wheat \$11@12; do Oat \$15; Rye, do \$21@22.

Mill Feed.—Quiet but steady. We quote City Mills Middlings at \$20, Brownstuffs at \$20 @ 21 per ton. Western Bran is held at \$20 per ton.

Provisions.—Active in a jobbing way at steady prices, but there is no business doing in round lots. For packed lots we quote as follows: Bulk Shoulders 6 cts.; long clear Sides 8½ cts.; clear rib Sides 8½ cts.; Bacon Shoulders 6½ cts.; clear rib Sides 9½ cts.; Hams, sugar cured 11@12 cts.; Shoulders, sugar cured, 7½ cts.; Breasts 9 cts.; Lard 10½ cts. for Refined. Meas Pork \$15.95 for old, and \$16.85 ½ bri. for new. *Dressed Hogs*—The market is firm at \$7.50@7.75 ½ 100 lbs. *Butter.*—Better. Choice solid packed Butter is in good request, but rolls are very dull. We quote Western, select, 23@25 cts.; N. Y. prime to choice, 24@30 cts.; choice Creamery, 30@34 cts.; nearby receipts, 15@20 cts. *Cheese*—Quiet but steady, as follows: N. Y. State, choice, 14@14½ cts.; do good to prime 13@13½; Western choice, 13@13½; do good to prime, 12@12½ cts. *Poultry.*—Very firm, especially turkeys and chickens. We quote as follows: Turkeys 15@16 cts.; and Chickens 11 to 12 cts per lb. undrawn, and 1 @ 2 cts extra for drawn; Ducks 11@13 cts., and Geese 9 to 12. *Eggs.*—The supply is increasing and prices are lower. We quote at 18@19 cts. per dozen.

Seeds.—Clover seed in good request and firm at 8½ @ 8½ cts. for choice.

Live Stock.—*Beef Cattle.*—Slow. We quote best on sale 5½@5½ cts.; generally rated first-class 4½@5½ cts.; medium or good fair quality 3½@4½ cts.; ordinary thin steers, oxen and cows, 2½@3 cts. *Milk Cows.*—Dull, prices range from \$20@45. *Hogs.*—Full supply and moderate demand. Prices ranging from 7½@8½ cts. *Sheep.*—Sluggish, with quotations for fair to good at 4@6½ cts.; Lambs, 5@7½ cts.

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FOOD AND HEALTH is a new weekly paper, published in New York, at \$3 a year by Mrs. Lewis, practical in its design and the treatment of its topics, which include pure food, its preparation and its influence in securing good health.

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Co-Operative Auction Sale,
under the auspices of the
Deer Creek Farmers' Club.

The First semi-annual Co-Operative Auction Sale, under the auspices of the Deer Creek Farmers' Club of Harford County, will begin

At the Fair Grounds, Bel Air,
ON WEDNESDAY, MARCH 30th, 1881
Beginning at 10½ o'clock A. M.

The Sale will consist of
VALUABLE YOUNG HORSES AND COLTS, GOOD, WELL-BROKEN MULES, REGISTERED SHORT HORN AND JERSEY CATTLE, FINE LOT OF HIGH GRADE CATTLE, suitable for breeding or other purposes, SEVERAL YOKE OF FINE WORKING OXEN, PURE BRED BERKSHIRE AND OTHER SWINE, FULL-BRED SOUTHDOWN AND GRADE SHEEP, POULTRY, consisting of Bronze and other Turkeys, Game and other varieties of Chickens.
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TERMS.—Sums of \$20 and under cash; on sums over that amount, for an article or articles belonging to one owner, a credit of six months' will be given, or note, bearing interest from the day of sale, with approved security. A discount of three per cent. for cash, whenever the purchaser is entitled to credit.

The above terms may be varied by direction of the owner of stock, &c., of which notice will be given by the Auctioneer when the article is offered for sale.

PERSONS who may wish to take advantage of this opportunity to dispose of surplus stock, &c., will please notify any member of the Committee.

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JOHN S. JANNEY, " "

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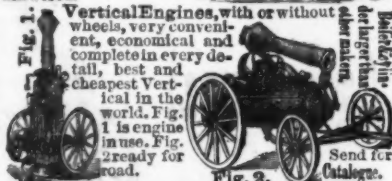
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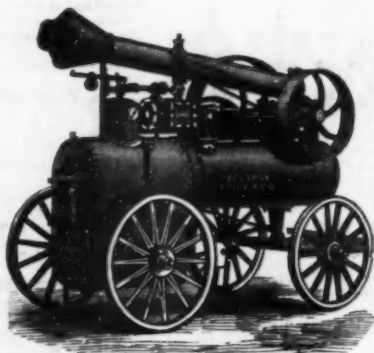
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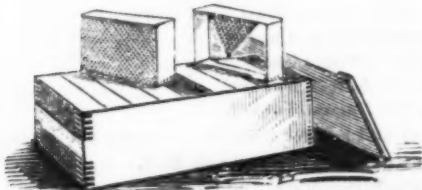
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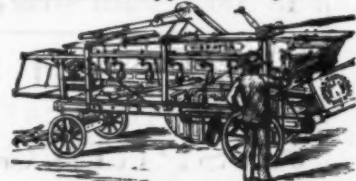
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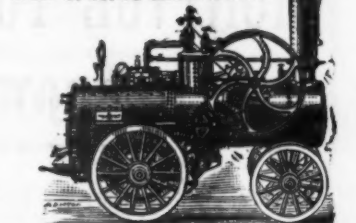
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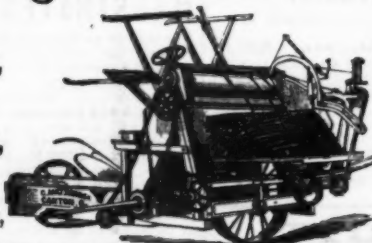
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